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Fish and Wildlife 2000

A Vision For The Future

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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned pubic lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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Oregon/Washington
Fish and Wildlife 2000

A Vision For the Future

A page is turning in the history of public land management. The challenges facing the American people during the twenty-first century include the needs for clean air, water, and wildlife in a quickly changing country where many demands are imposed on the landscape, including an ever-increasing need for resources.

The barometers that measure our affect on the land are the other creatures that live there, in streams and lakes, in oceans, and within terrestrial habitats. Fish and Wildlife 2000 is a decisive program to ensure the health of wildlife and their homes on BLM managed lands into the next century and beyond.

Achieving the goals of this program involves the help and cooperation of the true stewards of the public lands, the American people. Through public outreach, partnerships, research, and educational programs, BLM will work to ensure a lasting legacy of healthy ecosystems that sustain a diversity of fish and wildlife.

The future of public lands into the next century depends upon responsible stewardship of public land by its managers, the support and cooperation of concerned citizens, and the effectiveness of initiatives such as Fish and Wildlife 2000. The Bureau of Land Management in Oregon and Washington will prove its leadership by assuring healthy land and water resources for wildlife and the enjoyment of people.

D Dean Bibles

D. Dean Bibles
State Director

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Oregon/Washington

Fish & Wildlife 2000

A Vision for the Future

Executive Summary

The 16 million acres the Bureau of Land Management (BLM) administers within Oregon and Washington support an abundance and rich diversity of wildlife, fish, and botanical resources. Ensuring that these species are provided habitat of sufficient quantity and quality to sustain ecologically viable populations and maintaining their aesthetic, scientific, economic and social contributions is the overall goal of Oregon/Washington Fish and Wildlife 2000 (OR/WA FW 2000).

OR/WA FW 2000 was prepared by BLM managers, biologists, and botanists from the Oregon State Office and ten district offices across the two states pursuant to the national "Fish and Wildlife 2000: A Plan for the Future." The national document directs that each state develop their own Fish and Wildlife 2000 vision of the future and identify specific strategies, goals and objectives for conserving and managing the fish, wildlife, and botanical resources on BLM administered public lands.

The future direction for management of fish, wildlife, and botanical resources on Oregon/Washington BLM's public lands is outlined in OR/WA FW 2000 with strategies, goals and objectives presented in the following components: Wildlife Habitat, Special Status Species Habitat, Internal Coordination and Support, and Public Outreach. A seventh component, Staffing Needs, is incorporated in each of the other components. While some of the actions in OR/WA FW 2000 are already underway, full implementation of the program will occur over a period of years.

Because of the complexities of OR/WA FW 2000, its full implementation will require increased levels of both personnel and funding. An additional 151 specialists and support staff are needed in the wildlife, fishery, and botanical disciplines to meet the program's challenging opportunities. An estimated $180.5 million, inclusive of land acquisition and exchanges, is required above present funding levels over the next decade.

These increases in personnel and funding are needed due to steadily mounting demands and pressures being made upon the fish, wildlife and botanical resources and their habitat by an influx of people into the Northwest, an escalating number of users, additional hydrologic needs, and agricultural and industrial growth.

Also affecting the management of biological resources is the projected increase in the number of threatened/endangered and other special status species expected subsequent to inventory activities that will demand increased effort in managing their habitat. Two other factors demanding more management emphasis are consideration for old-growth forest ecosystems and improvement of rangelands, including enhancement of riparian and wetland areas.

Essential to BLM's management is continued cooperation with federal, state, and private organizations and various user groups to keep pace with the necessary conservation of our natural resources and to assist in their management. Contributions of organizations and users through various programs, partnerships, and voluntary efforts are important links in BLM's resource management program. As human population pressures, urbanization, and the potential for habitat loss all increase, the need for such cooperative efforts will also increase.

Because its scope is so extensive, OR/WA FW 2000 should be considered dynamic. As such, it allows for flexibility to promote a progressive and innovative management from early planning stages through the design and implementation of projects.

The guidance provided in OR/WA FW 2000 will help to focus and strengthen our leadership and commitments to our valuable fish, wildlife, and botanical resources and to ensure biological diversity now and into the future.

Oregon/Washington

Fish & Wildlife 2000

A Vision for the Future

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Oregon/Washington

Fish & Wildlife 2000

A Vision for the Future

Introduction

The evolution of multiple use management along with increased public interest and demand for fish, wildlife, and botanical resources on public lands in Oregon and Washington have placed extensive pressures on these resources. Wise management of all these resources is a strong commitment of the Bureau of Land Management (BLM) on the 15.7 million acres it administers in Oregon and over 300,000 acres in Washington.

An identifiable fish, wildlife and botanical program began evolving in the two states in the 1960s, expanded considerably in the 1970s, and experienced significant growth and maturity in the 1980s. Over these years, the pressures from population growth, urbanization, intensive forest management, and agricultural developments on private lands have elevated the importance of public lands for the maintenance of biological diversity.

These pressures, with their increased consumptive demands (mainly forage and timber production) and non-consumptive demands (such as recreation), present the BLM with a significant management challenge. Guidance for BLM's habitat management program is embodied in legal authorities, national policies, memoranda of understanding and cooperative agreements with outside entities, and various national Fish and Wildlife 2000 Plans (Appendices A-D).

While each of these directives serves an important need, only progressive and innovative resource management can ensure the viability of the fish, wildlife, and botanical resources for future generations. This philosophy is the thrust of Oregon/Washington Fish & Wildlife 2000 (OR/WA FW 2000) which provides state-level guidance for managing important fisheries, wildlife, and botanical resources on BLM administered public lands in Oregon and Washington for the next decade.

The goals, objectives, and priorities for the fish/wildlife/botanical program were established in a national BLM Fish and Wildlife 2000: A Plan for the Future (FW 2000) that was signed by the Director of BLM in May 1987 and subsequently adopted and published as policy for implementation by all field offices. Included in the program are management guidelines for all fish, wildlife, and botanical species and their habitat; management of threatened or endangered animals and plants and/or other special status species and their habitat; and management of special habitats that are rare and vulnerable plant communities and ecosystems.

The scope and design of FW 2000 is to provide for improved management of fish, wildlife and botanical habitats on public lands for the social and economic well-being of all Americans. Adequate numbers of personnel, internal coordination and support, and external coordination/outreach are critical to the success of this strategy.

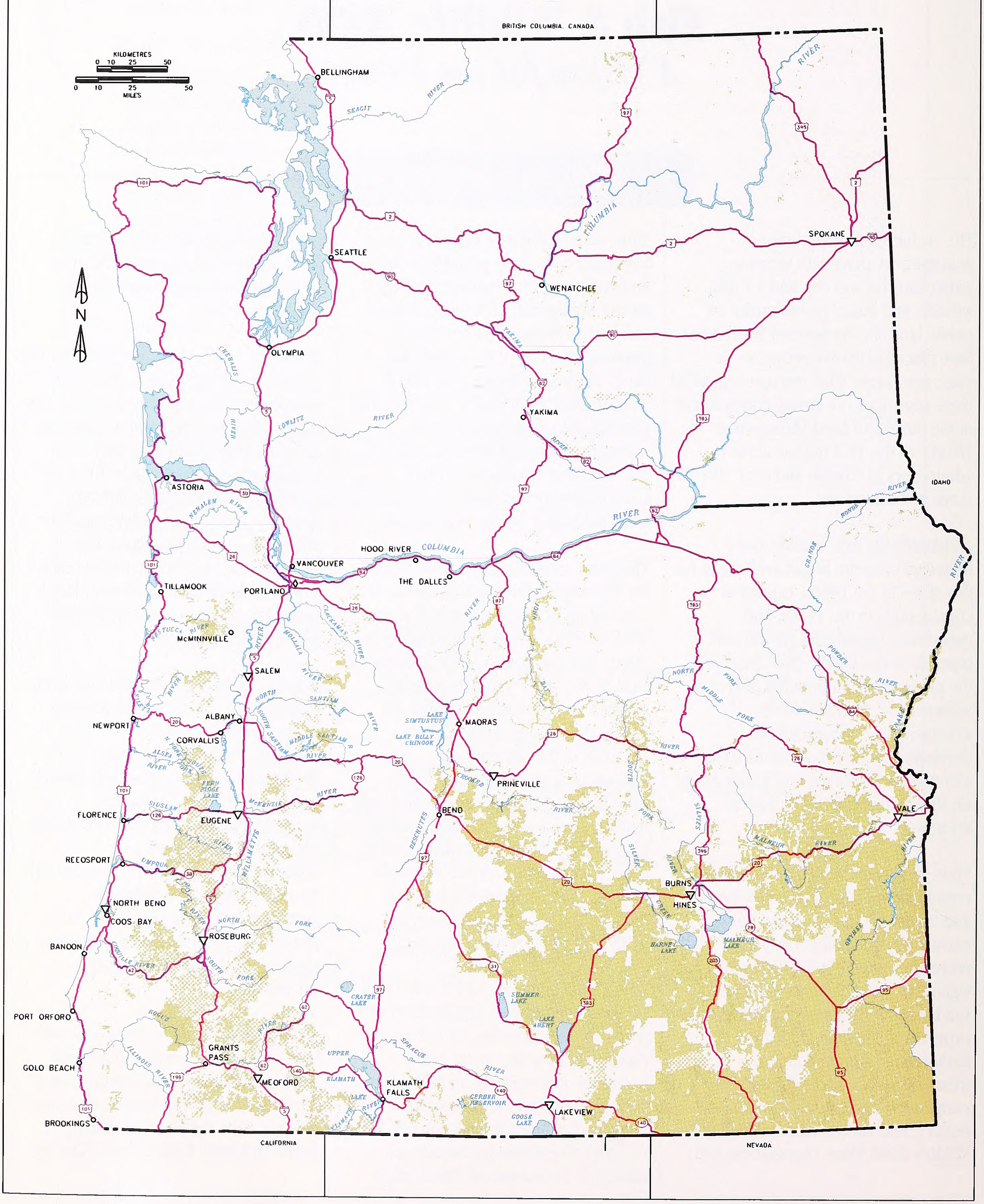
Incremental adjustments in planned accomplishments are expected to be made proportionate to funding and staffing increases.

Additional national strategy plans for the unique habitats of upland game and non-game birds, raptors, waterfowl, big game, fisheries, anadromous fisheries, and Watchable Wildlife provide more detailed goals and objectives for these specific resources. Other national strategy plans are being developed for other species. These Bureauwide strategic plans are being used by each BLM state to develop statewide plans specific to resources and conditions within their own state.

Oregon-Washington FW 2000 has been prepared in concert with its national counterpart. It is the first comprehensive statewide plan developed by BLM in these two states for its fish, wildlife, and botanical programs, and as such will be dynamic and subject to revisions as implementation proceeds. The plan will be used by biologists, botanists, managers and other decisionmakers who are responsible for implementing the fish, wildlife, and botanical programs.

An important outcome of the plan will be a better understanding of overall Bureau priorities for the program and the funding of management actions and projects considered urgent and of highest priority. Equally important, the

BLM Administered Public Lands in Oregon & Washington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GOLD BEACH
ILLINOIS RIVER
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MEDFORD
CRATER LAKE
UPPER KLAMATH
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KLAMATH FALLS
GERBER RESERVOIR
LAKEVIEW
GOOSE LAKE
BROOKINGS
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plan will be effective in avoiding duplication of work, obtaining support and increased funding from various sources, and encouraging resolution of resource problems.

Because normal funding appropriations to BLM have historically been too low to carry out a proactive program for effective management of fish, wildlife, and botanical resources, the BLM has compensated by including significant objectives and management actions related to these resources in current land use plans in Oregon and Washington. In addition, 74 Habitat Management Plans (HMPs) have been completed and 100 Areas of Critical Environmental Concern (ACECs) have been designated (as of October 1990) to guide the management of important fisheries, wildlife and botanical resources (see Appendix F for list of completed HMPs, and Appendix G for list of ACECs). Cooperative funding for projects and the use of challenge cost share appropriations have helped offset some of the funding shortfall.

These accomplishments reflect progress over the last decade toward better management of fish, wildlife and botanical resources in Oregon and Washington. In general, however, accomplishments have been mostly reactionary with only the most critical issues being addressed.

To more effectively respond to the future challenges of increasing demands on the public land resources, BLM will take a more proactive management approach. BLM must have the foresight, planning, and adequate funding to take necessary actions to preclude conflicts from arising where possible and to minimize adverse effects from any conflicts that are inevitable.

A more proactive approach such as this will require strong commitment from BLM managers, greater public involvement, and more cooperative funding from outside sources. Such an approach will also require significant increases in the BLM's budget and personnel in both Oregon and Washington.

Western Bog Violet–
Don Eastman

It was with the recognition of these additional budget and personnel needs that the input for OR/WA FW 2000 was compiled. Estimated funding and personnel needs discussed in this document were unconstrained by dollar amounts or personnel ceilings. In comparison to past expenditures, the costs may appear great; however, the benefits to the fish, wildlife, and botanical resources of the two states and their citizens will be greater, and in that perspective the expenditures should be viewed as a worthwhile investment for the future.

Relationship to the BLM Planning System

In the BLM planning system there are three tiers: the policy tier, resource management plan (RMP) tier, and activity plan tier.

The policy tier, of which both the national FW 2000 and the OR/WA FW 2000 are a part, is the initial tier where goals, objectives, priorities, alternatives and other planning factors are identified.

Sage Grouse

RMPs are land use planning documents, in effect generally for 10-20 years, in which managers allocate resources and select appropriate uses for public lands based upon direction from the policy tier. RMPs, or any earlier planning process documents called Management Framework Plans (MFPs), have been completed for all Bureau managed lands in Oregon and eastern Washington.

The activity plan tier for the fish, wildlife and botanical program is referred to as a Habitat Management Plan (HMP). HMPs must comply with decisions made in RMPs or MFPs, and include actions and on-the-ground projects designed to implement objectives of RMPs and other plans. Like HMPs, activity plans for ACECs and Research Natural Areas (RNAs) are designated during the planning process and describe management objectives, actions and projections to implement RMP decisions for these areas. Except for projections of additional ACECs/RNAs proposed to be established in new RMPs, the objectives and actions submitted by districts for inclusion in Oregon-Washington FW 2000 are consistent with existing RMPs or MFPs.

Significance of BLM Fish, Wildlife, and Botanical Resources

The biological and botanical diversity found on BLM lands in Oregon and Washington is one of the most significant in terms of diversity in the nation. Most, if not all, species known to occur in the two states occur to some degree on public lands (see Table 1). The diversity and abundance of many of these species have made them widely sought for their aesthetic, recreational, ecological, scientific, social, cultural, educational, and economic values.

The fish, wildlife and botanical habitat managed by BLM totals over 16 million acres of public land and is broadly categorized as shown on Table 2. These habitats occur throughout both states, but are most notable in the rangelands of eastern Oregon and Washington, and the forests of western Oregon and Washington.

The BLM manages these important resources on the dispersed lands it administers through five districts and three detached area offices on the eastside, and five districts and one detached area office on the westside. (See Overview of Oregon/Washington programs section of this document.)

Also of significance are a number of special status species, including some that are threatened/endangered, that occur on BLM lands in Oregon and Washington. Threatened/endangered species are those designated as such by the U.S. Fish and Wildlife Service. Other special status species include those listed by the respective State, species which are either proposed or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service, and those designated by a State Director as Bureau Sensitive. Public lands in Oregon support fifteen federally-listed species, and Washington BLM lands support five. The number of other special status species known to occur on BLM land in Oregon (90 spp.) and Washington (21 spp.), along with another 49 species suspected in Oregon and 41 in Washington, represents a sizeable potential increase in the number of future threatened/endangered species (see Table 3 and note that some species may occur in both states, so the state totals in some cases include an overlap and therefore are not additive).

Fish and wildlife resources of Oregon and Washington contribute significantly to both consumptive and non-consumptive recreational pursuits, and economies of both states. Over 85 percent of the residents of both states pursue wildlife-associated recreation. In 1985 for Oregon alone, use records indicate that approximately 1.3 million hunters and anglers spent more than 18 million days participating in their activities. In Washington, a total of 1.6 million sportspeople spent 25.6 million days in the field (Tables 4 and 5). A 1988 study conducted by Intercept Research Corporation for the Defenders of Wildlife estimated that in Oregon alone approximately $523 million was spent on observing, photographing or feeding non-game wildlife. In another study (see Table 6) hunting, fishing and non-consumptive expenditures totaled over $805 million in Oregon and over one billion dollars in Washington.

Table 1. Number of Species Known to Occur in Oregon and Washington

	Oregon	Washington
Freshwater Fish	106	83
Reptiles/Amphibians	61	51
Birds	442	402
Mammals	154	161
Vascular Plants	3,400	3,000

Table 2. Major Habitats on BLM Lands in Oregon and Washington (1990) (In Acres)

Habitat	Oregon	Washington	Total
Big Game	12,459,000	320,000	12,779,000
Small Game	12,571,000	320,000	12,891,000
Waterfowl	91,500	3,000	94,500
Riparian	104,500	2,800	107,300
Wetlands	47,000	1,000	48,000
Lakes	>58,000	<1,000	59,000
Reservoirs	16,500	0	16,500
Fishable Streams (miles)	3,395	126	3,521
Perennials Streams (miles)	7,014	148	7,162

Table 3. Number of Special Status Species Documented on BLM Lands in Oregon and Washington (1990)[1]

	Federal Status				State Status			
	T/E Listed		Candidate		T/E Listed[2]		Bureau Sensitive	
	OR	WA	OR	WA	OR	WA	OR	WA
Mammals	2	2	4	4	1	-	1	-
Birds	5	3	6	4	-	2	-	-
Reptiles & Amphibians	-	-	2	-	-	-	0	1
Fish	6	-	2	-	-	-	-	-
Plants	2	-	68	11	-	-	7	1
Total	**15**	**5**	**82**	**19**	**1**	**2**	**8**	**2**

[1] Excludes whales, seaturtles, and invertebrates. Some species are found in both states, thus numbers are not additive.
[2] Species included in federal categories are not included in state count.

Table 4. Recreation Participants[1] in Oregon and Washington (1985)[2]

	Oregon	Washington	Total
Hunters	351,000	302,000	653,000
Anglers	943,000	1,307,000	2,250,000
Primary Non-residential non-consumptive wildlife users	111,000	200,000	311,000

[1] 16 years and older.
[2] 1985 Survey of Fishing, Hunting and Wildlife Associated Recreation

Table 5. Recreation Days in Oregon and Washington (1985)[1]

	Oregon	Washington	Total
Hunting	4,030,000	4,511,000	8,541,000
Fishing	14,091,000	21,133,000	35,224,000
Primary Non-Residential Non-consumptive Wildlife User Days	4,810,000	5,900,000	10,710,000
Total Days	**22,931,000**	**31,544,000**	**54,475,000**

[1] 16 years and older
1985 Survey of Fishing, Hunting and Wildlife Associated Recreation

Forecasts of the Future

The natural resources of Oregon and Washington—specifically their extensive forests, rangelands, wildlife, fisheries, and agriculture lands—have provided residents of both states with a high quality of living, while at the same time providing them with employment and income to enjoy that environment. Unprecedented demands, however, are being made on both developed and undeveloped lands and other resources in the two states. This reliance upon the natural resources necessitated forecasting human activities to the year 2000 to adequately assess the impacts of population increases and land use practices upon fish, wildlife, and botanical resources of public lands.

Population Growth

The human populations of both states are expected to continue growing steadily. If moderate growth rates were applied, Oregon would have an increase of 1 million people from 2.8 million in 1990 to 3.8 million in the year 2000. For the same time period, Washington's population would increase by 0.6 million, from 4.7 million to 5.3 million people.

A high growth scenario, however, might be more realistic when considering the growth trends for the Northwest between 1970 and 1980. For that decade, the annual growth rate of the nation as a whole increased an average of one percent. By contrast, the growth rate in the Pacific Northwest for the same timeframe was more than double the national average, with the population in Oregon growing annually by 2.33 percent and Washington by 1.94 percent.

Regionwide, both rural and urban environments are experiencing an increasing population growth. Although the growth rate for urban living is higher, there is a significant increase in numbers of people moving into rural areas as well. This rural development is having an increasingly adverse impact upon natural resources in areas where noteworthy population increases are occurring such as in western Oregon, and particularly southwestern Oregon.

Fish, Wildlife and Botanical Resources

Accompanying the large population influx will be increased pressures on fish, wildlife, plants and their ecosystems due to increased public demands for all natural resources. Especially higher demands are expected for fish, wildlife, timber, recreation, and forage. Interestingly enough, increased urbanization results in greater demands for nonconsumptive use of fish and wildlife resources such as recreation rather than traditional consumptive uses of hunting and fishing.

Special Status Species

Management of special status species in the future will be intensified for several reasons. One reason for this premise is that the number of threatened, endangered, and other special status species in the two states will undoubtedly increase as the U.S. Fish and Wildlife Service processes its backlog of existing candidate species (see Table 3 and Appendix E). Another factor is the anticipated human population growth which will inevitably increase pressures upon fish, wildlife, and botanical resources. A continuing escalation in public interest and support for special status species will also attribute to the need for intensified management of special status species and their ecosystems.

Additionally, as awareness of special status species increases, there are two peripheral but closely related issues rapidly gaining momentum: the concepts of maintenance of viable populations, and managing for biological diversity. Particular attention must be directed toward both of these issues as knowledge of their importance evolves.

Forest Management

The BLM lands of Oregon have been a primary timber source since the early 1950s. In FY90, the Oregon combined allowable sale quantity was 950 million board feet.

Table 6. Annual Economic Importance of Fish and Wildlife in Oregon and Washington (In Dollars)

	Oregon	Washington
Hunting Expenditures[2]	198,161,000	191,958,000
Fishing Expenditures	428,069,000	549,922,000
Non-Consumptive Expenditures	148,707,000	300,039,000
Total Wildlife-Recreation Expenditures	**805,181,000**	**1,102,577,000**

[1] National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

[2] Numbers displayed in table are not additive.

The timber industry, specifically lumber and wood products, is the largest manufacturing industry in the Pacific Northwest, accounting for 22% of all manufacturing jobs in 1987. More than 50% of the lumber and 70% of plywood within the tri-state region of Oregon, Washington and Idaho was produced in Oregon alone. The region as a whole accounted for 38% of the U.S. lumber production and 42% of the nation's plywood production. Regionally, pulp and paper production represented 14% and 10% respectively of the national production during the 1970s.

Based on a continued high public demand for wood products, the long-term outlook for the timber industry is favorable. Recently, however, considerable debate has focused on the issue of old-growth, or ancient forests, and their management. While conservationists contend too much has already been harvested, timber industry advocates favor harvest of remaining old-growth forests.

Another factor impacting timber harvest is the listing on July 23, 1990, by the U.S. Fish and Wildlife Service of the northern spotted owl as a "threatened" species under authority of the Endangered Species Act of 1973, as amended. This listing of the northern spotted owl is specific to harvesting of old-growth forests which provide primary habitat for the owl. Considerable debate has ensued since listing of the northern spotted owl, but the ultimate outcome is expected to be that old-growth forest ecosystems will be managed, not for a select component, but with consideration for all of their components.

Steens Mountain—Burns District

One of the primary objectives of the OR/WA FW 2000 is to emphasize the need for more multiple use planning considerations in the management of Revested Oregon and California (O&C) Railroad lands in western Oregon. Specifically, the fish/wildlife/botanical resources need to take on greater importance with forest management programs on these lands due to conflicts between these resources and timber harvest, many of which are inherent. Timber harvesting activities have some unavoidable adverse impacts on fish, wildlife and botanical resources. These include road construction and use, timber harvest (cutting and logging), slash disposal, and brush removal. Specific management activities which need to be addressed include: herbicide use, management of headwater/riparian habitats, anadromous fish habitat, elk/road conflicts, retention of soft and hard snags, retention of down and dead wood material, surface disturbance, nesting habitat of the marbled murrelet, and the northern spotted owl.

Range Management

Over the past twenty to thirty years, the BLM has provided more than 900,000 animal unit months (AUMs) in Oregon and 25,000 in Washington which collectively have supported over 200,000 cattle and horses and 11,200 sheep annually. Future demand for forage is expected to continue at a similar use rate.

Historically, domestic livestock grazing has had adverse impacts on watershed, fish, wildlife, and botanical resources. Through its grazing management program, BLM has begun to reverse much of this damage. Still, a great deal remains to be done. Interdisciplinary input into allotment management plans which incorporate site-specific fish, wildlife and botanical concerns is critical to the success of these plans in improving ecological condition and sustaining biological diversity. Similar input is required with the range improvement program to ensure that vegetation manipulation and livestock facilities benefit fish, wildlife and botanical resources or incur, at the least, acceptable adverse impacts.

A high priority for the range management program, as well as the fish/wildlife/botanical programs as a whole, is the improved management of riparian and wetland areas.

Water Resources

Water availability is vital not only to fish, wildlife and botanical resources but to agriculture, industry, forestry, mining, and power and land development. Except in their most arid regions, Oregon and Washington in general have naturally abundant water resources available to accommodate such functions. However, competition for water has been intense, and there is increased demand expected to accompany predicted growth in agriculture, industry and population in the next decade.

The water allocation policy is established at the state level in both Oregon and Washington, through legislation and subsequent rules and/or regulations. Rights governing use of water in both states are complex and established under the appropriative doctrine, meaning the user must take otherwise unused water and put it to beneficial use after receiving a permit. Each water right is given a priority date to determine order of use if enough water is not available to satisfy all water rights during low flow periods or drought conditions. Most streams are already over appropriated.

Fish and wildlife resources are recognized as one of the beneficial uses for both consumptive and instream water rights. Future opportunities exist to obtain instream water rights for flows to protect fish and aquatic life, wildlife, and fish and wildlife habitat of streams or lakes (to maintain water surface elevations). As the water demand increases for various uses, however, there will continue to be major issues about water availability including over appropriation of water, insufficient instream flows, and water quality. In general, water for fish, wildlife and botanical resources will be most critical in the arid eastern rangelands of the two states, particularly during years of drought.

Cooperation With Other Organizations & User Groups

The importance of fish, wildlife and botanical resources has long necessitated the BLM in Oregon and Washington to coordinate, and to be alert for additional cooperative opportunities, with many other Federal, State and private organizations and user groups to improve its resource management. Such interactive resource management on public lands will be increasingly more important as population pressures, urban sprawl, and habitat loss increase.

Steelhead Trout

Federal Agencies and/or Organizations

BLM emphasizes close coordination with other Federal agencies to maximize communication and reduce duplication of efforts. As such, the BLM has long standing cooperative relationships in both Oregon and Washington with many Federal agencies including the U.S. Forest Service and its PNW Research Station, U.S. Fish & Wildlife Service, Bureau of Indian Affairs and numerous Indian tribes, Bureau of Reclamation, the U.S. Army Corps of Engineers, Bonneville Power Administration, National Marine Fisheries Service, Northwest Power Planning Council, and Soil Conservation Service. These cooperative efforts have all been very productive and beneficial for BLM. Most notable of the cooperative efforts are those with the U.S. Forest Service which shares many identical resources, issues, and management with BLM, and those with the U.S. Fish and Wildlife Service which manages migratory and threatened/endangered species.

As part of its coordinated management activities, OR/WA BLM has co-sponsored numerous symposia, workshops, seminars, training courses, and publications to improve communication and ensure technology transfer.

State Agencies

There is close coordination between BLM and a number of state agencies in resource management. BLM, as the manager of public lands, has responsibility for habitat management. With the exception of threatened or endangered species, marine mammals, and migratory birds, the state fish and wildlife agencies manage resident populations of fish and wildlife which are considered to belong to the people of each respective state. Also, appropriate state agencies regulate all aspects of the hunting and fishing programs (seasons, limits, license fees, etc.), conduct surveys and studies, and perform the field administration of those programs.

The Oregon Endangered Species Act of 1987 initiated an active endangered plant program in the Oregon Department of Agriculture. Species of concern to the state are also those of concern to BLM which enables a mutually beneficial relationship between the agencies. At this stage of special status species management, the BLM and state agencies are cooperating in conducting inventories, monitoring and doing studies to develop background data essential to management of these species.

In both Oregon (Division of State Lands) and Washington (Department of Natural Resources), the State Heritage Program maintains a statewide data base of rare plants and animals that are either representative or unique plant communities. The BLM maintains a cooperative relationship with the Heritage programs in sharing information as well as inventorying of species.

The Sikes Act in 1974 greatly facilitated the degree to which BLM and state agencies cooperate. This Act mandated development of habitat management plans with the state as prescribed through the Resource Management Plan process. Development of comprehensive HMPs have provided the opportunity to establish mutual goals and objectives and determine mutual habitat development projects. As of 1989, there were 34 cooperative plans between the BLM and the Oregon Department of Fish and Wildlife, and another 8 between the BLM and Washington Department of Wildlife. In both states, BLM will continue to urge cooperative planning, funding, and implementation of habitat improvement programs and projects to maximize mutual benefits.

Biddle's Lupine—Nora Taylor

The BLM has also fostered cooperative working relationships with state universities. Universities have assisted Oregon/Washington BLM with sponsorship of numerous symposia, technology transfer or information exchanges, and also conducted specific research upon request. Their assistance in the last 10 years has been especially valuable in preparing BLM personnel to deal with sensitive issues, and particularly threatened/endangered species such as the northern spotted owl and the bald eagle. University research assistance has also been notable with sagegrouse habitat use in eastern Oregon and elk/road conflicts in western Oregon.

The BLM's Research Center located in Corvallis, Oregon in association with Oregon State University (OSU) is another cooperative effort. Established in 1991, the Research Center has an initial staff of five (a research advisor, forest ecologist, wildlife biologist, silviculturist, and range scientist).

Conservation Organizations and User Groups

It is critical to BLM's mission in Oregon and Washington to involve conservation organizations and user groups in the management of their public lands. These diverse entities serve an important role in planning and decisionmaking, helping to ensure that fish, wildlife, and botanical resources are adequately considered in multiple use management. The BLM in Oregon and Washington has benefited greatly from cooperating with conservation organizations and user groups, including: American Fisheries Society, Audubon Society, Berry Botanic Garden, The Wildlife Society, Izaak Walton League, Sierra Club, Wilderness Society, Defenders of Wildlife, The Nature Conservancy, Oregon Trout, Trout Unlimited, Ducks Unlimited, Northwest Steelhead Association, and Rocky Mountain Elk Foundation among many others. Assistance from such interest groups has included labor, funds, materials, information and technical assistance, inventories, ACEC evaluation, HMP review, monitoring, and research. During times of budgetary constraints especially, these contributions have been critical to the development of fish, wildlife, and botanical programs.

Cooperative land use planning has been so successful that BLM is encouraging expanded involvement in HMP planning. Many environmental and user groups and organizations are being encouraged by BLM to become involved and signatory to these documents. This open planning process is a way of ensuring public involvement in the management of the public lands.

Challenge Cost Share/ Volunteer Contribution Programs

The BLM in OR/WA has long sought the interest and contributions of outside organizations, and has used such contributions to supplement its fish, wildlife, and botanical programs whenever possible. Of perhaps greatest importance, however, is the interest, stewardship, and sense of ownership of the public lands that these contributions generate.

The challenge cost share program, initiated by Congress in 1985, has already greatly benefited BLM and can continue to enhance its fish, wildlife, and botanical programs. By 1992, the

BLM OR/WA cost share program had received over $1,378,200 of outside contributions (see Table 7). Of significance is the $1,004,300 of unfunded proposals that was foregone due to the BLM's lack of funding to match potential contributions.

Volunteerism provides not only outside contributions (direct dollars), volunteer labor, material, and equipment, but also an interested clientele. A summary of volunteer contributions to the BLM OR/WA fish, wildlife, and botanical programs between 1987 and 1991 is provided in Table 8. Over these five years, contributed labor alone was worth over $800,000 to BLM.

An essential component of the volunteer program is that BLM provide recognition through publicity and awards to encourage volunteerism. The future success of volunteer contributions will ultimately depend on BLM OR/WA's ability to raise the consciousness level of both BLM staff and the public regarding the value of volunteerism.

Both challenge cost sharing and volunteerism programs will require that biologists and botanists become more actively involved in these programs in the future to capitalize on their full benefits.

Iceberg Point ACEC-San Juan Islands–Erick Campbell

Table 7. Challenge Cost Share Projects of Oregon/Washington

(In Dollars)

Fiscal Year	Number of Projects	BLM	Contributed	Unfunded Proposals
1988	4	35,000	48,000	73,000
1989	16	153,000	233,000	436,000
1990	32	215,000	259,000	165,000
1991	51	364,400	439,800	176,000
1992	45	349,000	398,400	154,300
Totals	**148**	**1,116,400**	**1,378,200**	**1,004,300**

Table 8. Volunteer Services Donated to OR/WA BLM Fish, Wildlife, and Botanical Programs

Year	Total Hours Contributed	Value of Contributed Labor	Cost to BLM
1987	16,432	$152,858	$43,020
1988	8,699	74,304	11,695
1989	22,837	261,796	19,212
1990	16,201	118,519	41,410
1991	22,561	264,578	94,450
Totals	**86,730**	**$872,055**	**$209,787**

Current Fish, Wildlife and Botanical Program

The BLM's fish, wildlife, and botanical programs serve both direct and indirect functions in Oregon and Washington. The indirect support activities include providing resource data and recommendations to other resource management activities to mitigate potential impacts and provide data and expertise for land use decisions and management processes.

The direct or proactive functions of the programs include inventory, monitoring, habitat improvement, project development and maintenance, and involvement in the preparation of Resource Management Plans, Habitat Management Plans, and ACEC/RNA activity plans. To date, OR/WA BLM has completed 74 HMPs providing specific management direction (Appendix F).

In RMPs, there is emphasis given to threatened/endangered and other special status species, riparian ecosystems, anadromous fish, and other priority species and habitats. The requirements of the Endangered Species Act of 1973, as amended, mandates BLM to avoid jeopardizing T/E species and to provide for their recovery. Additionally, BLM policy requires protection and habitat management for other special status species (such as federal candidates) so that BLM will not contribute to the need to list species.

Special plant communities and plant and animal habitats have been identified for management as Areas of Critical Environmental Concern. Also, riparian ecosystems have long been recognized for their disproportionately high value, especially for fish/wildlife/botanical resources.

BLM's funding for management of the fish, wildlife and botanical resources has historically come from two different sources. Districts in eastern OR/WA receive funding through the BLM's annual appropriation to the Management of Lands and Resource (MLR) activities. Some MLR funds for threatened/endangered species and Challenge Cost Share Program are expended on O&C lands in western Oregon. Districts in western Oregon originally received most funding through the return of timber sales receipts specified in the O&C Act (50% to BLM and 50% to the O&C counties). In 1982, however, that system was amended and funds are now derived from the BLM's O&C appropriation from Congress. Expenditures for both appropriations from 1975 to 1992 are shown in Figure 1. The actual need for funds to manage the fish, wildlife, and botanical program is now considerably greater as identified in the following section.

The BLM's OR/WA fish/wildlife/botanical program had 85 biologists and botanist) employed in 1991 (Table 9). In many instances, program specialists spend the majority of their time fulfilling indirect support requirements rather than developing an active, progressive program. An example of this situation is western Oregon where biologists and botanists spend 80 to 90 percent of their time conducting clearances and providing input to support activities for timber sales, with very little time for proactive program planning or development.

Sage Grouse

Cobra Lily–Coos Bay District

Cronquists Stickseed–P. Eastman

Little Wild Horse ACEC–Burns District

Oregon/Washington

Fish & Wildlife 2000

A Vision for the Future

Our Vision

The goals and objectives of the BLM's Fish/Wildlife/Botanical program for the future in Oregon-Washington are organized into seven components: Wildlife Habitat Management, Riparian Areas, Fisheries Habitat Management, Special Status Species Habitat Management, Internal Coordination and Support, Public Outreach including External Coordination, and Staffing Needs (see Figure 2).

These seven components define the overall program by manageable categories and provide emphasis for direction by Bureau directives and budget processes. Management needs within these components are further divided into program elements as indicated on Figure 2 and discussed in the following narratives and financial planning sheets located in Appendix H. Staffing needs (component #7) are not presented in a separate element, but discussed as needs within each of the 13 program elements.

Increasing demands on the fish, wildlife, and botanical programs will necessitate a great many policy and program changes between now and the year 2000. Both funding and staffing levels will need to increase significantly to keep pace with the anticipated program demands. Present staffing levels in Oregon/Washington BLM in the fisheries, wildlife, and botanical disciplines are insufficient to meet even the existing resource management demands. With their heavy workload, the present numbers of staff cannot meet all of the required support activities (i.e., data collection, resource input, clearances, mitigation) and at the same time maintain a proactive program outlook to benefit fish, wildlife, and botanical resource values.

Several other factors highlight the need for increased staffing levels. For instance, anadromous fisheries which have historically experienced catastrophic population declines and are still declining, although to a lesser degree, are of greatly increasing concern. This is due to the number of salmonid species that are currently being reviewed for possible listing as T/E species. An increasing focus on the importance of riparian ecosystems in

Picket Rim ACEC—Burns District

Table 9. Staffing Distribution of Biologists for OR/WA Fish/Wildlife/ Botany Program (1991)

		Biologists				
Office	**No. of Offices**	**Wildlife**	**Fishery**	**Botanists**	**NRS**	**Total Staff**
Resource Area	28	34	8	8	2	52
District	10	7	8	8	4	27
State	1	3	1	1	1	6
Totals	**39**	**44**	**17**	**17**	**7**	**85**

Figure 1. Fish, Wildlife, and Botanical Program Funding for OR/WA (1975-1992)

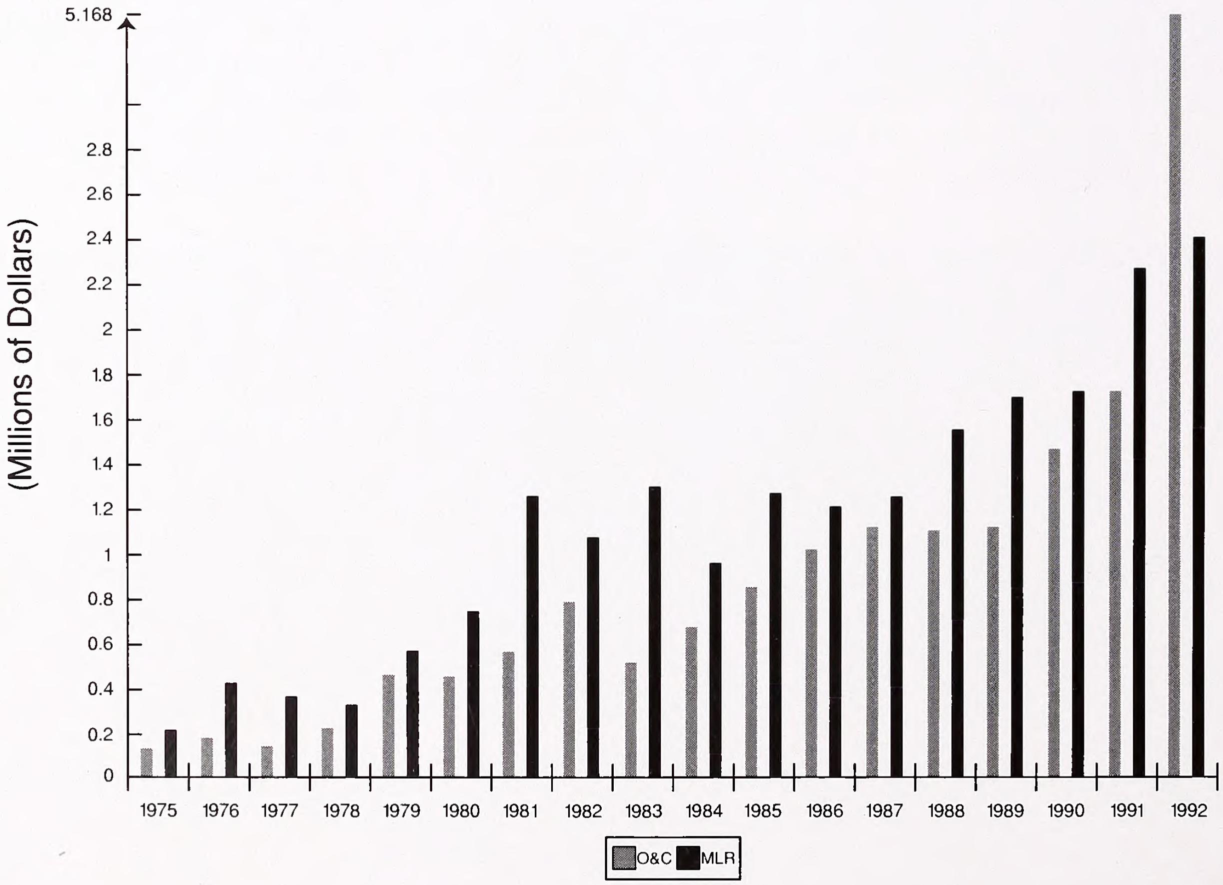
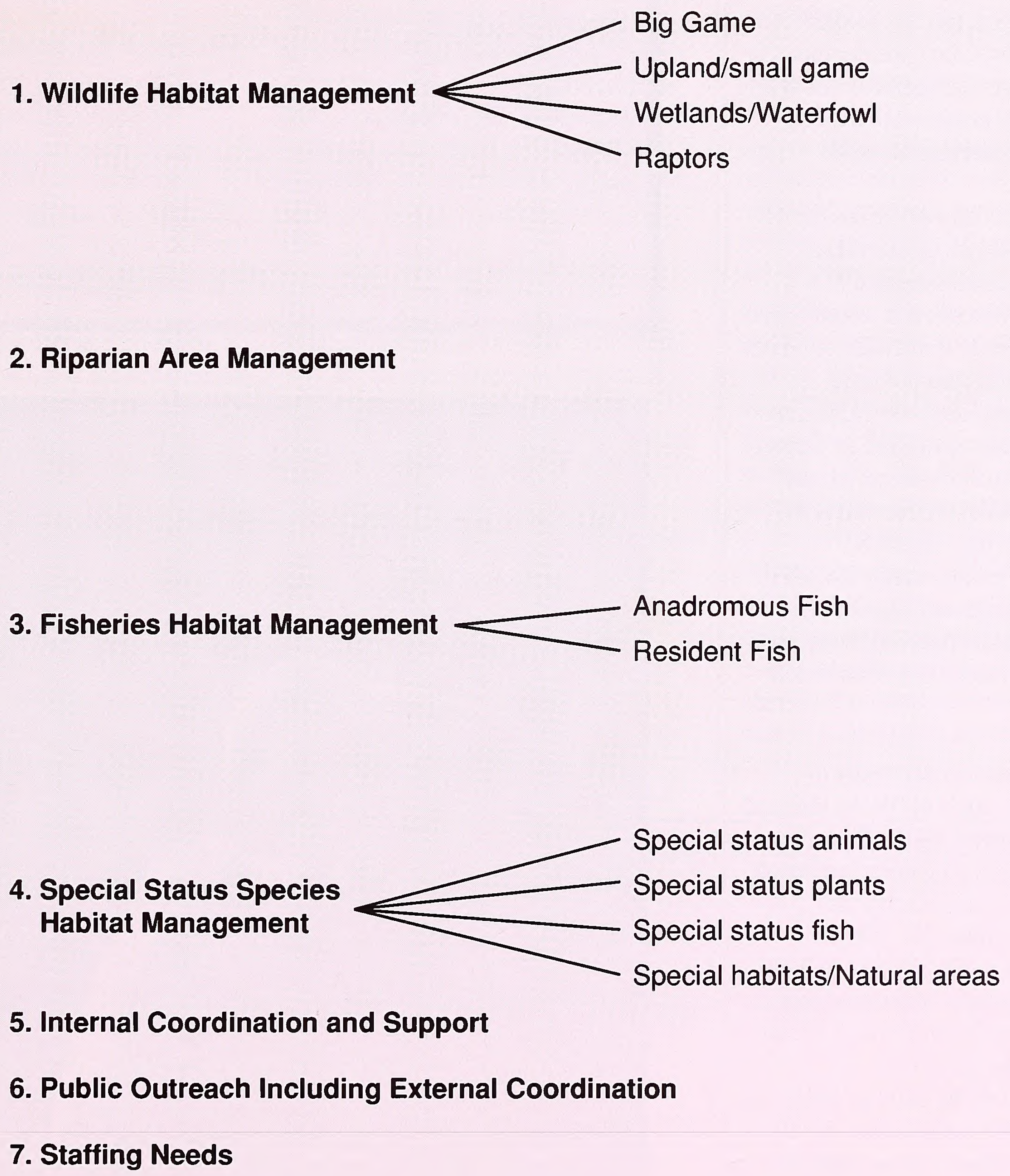


Figure 2. Organization of BLM Oregon-Washington FW 2000 Program


1. Wildlife Habitat Management
Big Game
Upland/small game
Wetlands/Waterfowl
Raptors
2. Riparian Area Management
3. Fisheries Habitat Management
Anadromous Fish
Resident Fish
4. Special Status Species Habitat Management
Special status animals
Special status plants
Special status fish
Special habitats/Natural areas
5. Internal Coordination and Support
6. Public Outreach Including External Coordination
7. Staffing Needs

OR/WA will likewise require additional personnel and management strategies. Additionally, management needs for special status species are expected to increase substantially during the next decade. The need, too, for greater multiple use resource considerations in forest and range management will create a much greater workload in the fish, wildlife and botanical programs.

The following section describes the management actions, studies, and habitat improvements needed to implement a proactive fish, wildlife, and botanical program. It includes estimated work years, costs, and potential program accomplishments (Appendix H). The estimates, provided by district and resource area personnel for the period 1990-2000, are for additional unfunded work that cannot be accomplished with presently allocated resources (dollars and personnel). These costs can be reduced, however, by the use of volunteers and contributed funds.

Additional personnel necessary to accomplish the goals of OR/WA Fish and Wildlife 2000 are shown in Table 10, and additional funding needs are listed for the other six major program components in Table 11. When considering an additional $51 million identified for habitat acquisition and exchange not included in Table 11, the total additional cost of fully implementing OR/WA 2000 would be an estimated $180.6 million over the 10-year period. Figure 3 shows how this total would be expended.

Support for fish, wildlife, and botanical resources in the region is very strong. A 1988 Defenders of Wildlife survey of Oregonians revealed that 92 percent used public lands within the past year, 96 percent believe we have responsibility for preventing extinction of wildlife, and 74 percent cited consideration for future generations and adequate habitat for plants and animals as very good reasons to protect and

Table 10. Number of Additional Staff Needed To Fully Implement OR/WA FW 2000

Type of Position	Number
Wildlife Biologists	27
Fishery Biologists	18
Botanists	27
Biological Technicians[1]	49
Others[2]	30
Totals	**151**

[1] Includes all types (wildlife, fishery, etc.)
[2] Includes all others, e.g., reality specialists, procurement specialists, hydrologists, statisticians, engineers, administrative assistants, public affairs specialists, etc.

Great Blue Heron—Marty Cordano

preserve natural areas. These responses indicate the importance of fish, wildlife, and botanical resources and their habitats to the people of Oregon and Washington.

Public lands in Oregon and Washington provide habitat for approximately 536 species of wildlife excluding fish, incidental species, and invertebrates. There are 57 species of reptiles and amphibians, 349 bird species, and 130 different mammals that spend a portion of their life cycle on public lands.

Enhancing the diversity and abundance of wildlife on BLM lands is a cooperative effort primarily with the state wildlife and fishery agencies in Oregon and Washington. Past projects have resulted in transplants and reintroductions of bighorn sheep, mountain goats, elk, pronghorn antelope, beaver, wild turkey and peregrine falcon to name a few. There is still, however, much to be done to enrich and sustain this diversity of wildlife. Future projects include the reintroduction of Columbian sharp-tailed grouse into suitable habitats as well as continuation of current transplant programs and habitat improvement programs.

Management attention is also being given to neotropical birds as part of a comprehensive Neotropical Migratory Bird Conservation Program due to their declining populations. Management guidelines are described in "Nongame Bird Habitat Conservation Strategy Plan."

Wildlife is an integral part of a functioning and sustainable ecosystem, with all species playing an important role in the biological diversity and relative stability of that system. Demand for use and enjoyment of the wildlife resources increases along with expanding human population; continued industrialization, urbanization, and agricultural practices; and increasing water and energy development and recreational pursuits. Such increased uses are accelerating impacts on the quality and quantity of wildlife habitats on both private and public lands as never before. This situation makes public lands with their rich diversity of habitats of crucial importance for the maintenance of the wildlife heritage in both states.

The need to manage this heritage has been recognized in various laws (Appendix A). Development and utilization of lands for fish, wildlife, and botanical resources are cited in the Federal Land Policy and Management Act (FLPMA) as one of the major uses of public lands. With the passage of FLPMA in 1976, Congress directed the BLM to manage the public lands in a manner that will provide food and habitat for fish and wildlife along with other multiple uses. The BLM goal for the overall habitat management program is to "ensure optimum populations and a natural abundance and diversity of wildlife resources on public lands by restoring, maintaining, and enhancing habitat conditions through management plans and actions integrated with other uses of public lands through

Table 11. Summary of Additional Financial Needs for OR/WA FW 2000, Excluding Acquisition and Exchanges[1]

($000)

Program Component	1990-1991	1992-1993	1994-1995	1996-2000	Total
Wildlife Habitat Management	2,802	6,300	7,051	13,997	30,150
Riparian Area Management	1,677	3,661	4,250	7,830	17,418
Fisheries Habitat Management	2,558	6,480	5,261	9,530	23,829
Special Status Species Habitat Management	6,079	11,603	10,760	22,352	50,794
Internal Coordination and Support	485	880	732	1,796	3,893
Public Outreach	264	838	794	1,624	3,520
Totals	**13,865**	**29,762**	**28,848**	**57,129**	**129,604**

[1] These funds are needed in addition to the FY 1989 Fish and Wildlife budget.

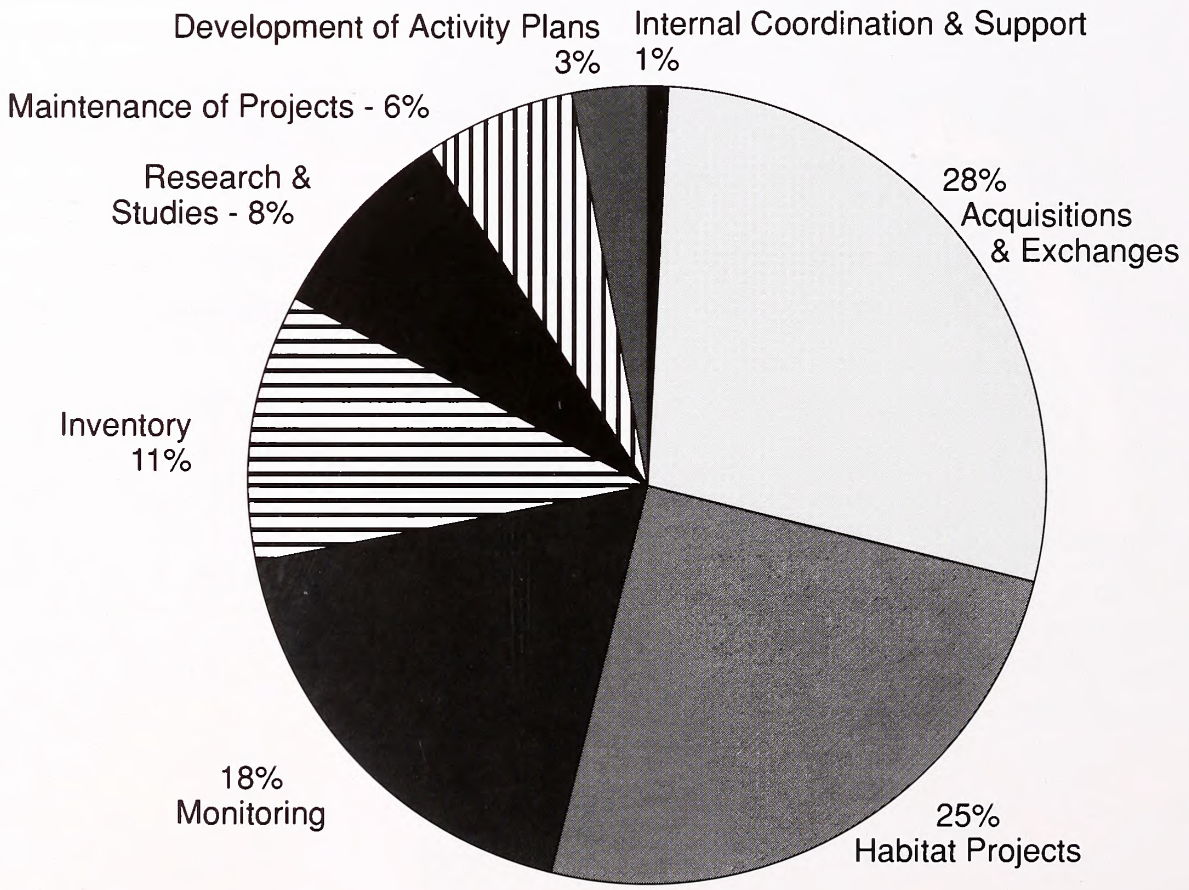
coordination with other programs, the states, by management initiatives, and through direct habitat improvement projects." All of the goals and objectives detailed in this OR/WA Fish and Wildlife Vision are consistent with the national Fish and Wildlife 2000 strategy.

Because the wildlife habitat management component is so extensive, this discussion of the overall habitat management program is followed by individual discussions of more specific aspects of the program: big game, upland/small game, wetlands/waterfowl, and raptors.

SNOWY PLOVER
NESTING AREA

Increasing Public Awareness–Coss Bay District

Figure 3. Distribution of Additional Funding Needed to Implement OR/WA FW 2000



Program Components

Big Game

Background

A number of big game species occur on public lands in Oregon and Washington. The most widespread species are deer and elk which inhabit areas on the east and west sides of the Cascade Mountain Range. BLM lands also support populations of bighorn sheep, pronghorn antelope, mountain goat, mountain lion and black bear. Some species, such as pronghorn antelope, are increasing in population numbers; over 90% of the pronghorn population in Oregon is dependent upon BLM lands during at least part of their life cycle. Populations of bighorn sheep, mountain goat, black bear, elk and mountain lion are stable or increasing. Populations of other species such as deer and elk are stable or declining, with their decline being attributed to the following:

- Human related disturbances, urban expansion, competing land uses (livestock grazing, timber harvesting, unrestricted vehicular road use);
- Successive severe winters, successive droughts over the last decade; and
- Decreasing suitability of vegetation communities as big game habitat due to lack of fire and advanced plant successional stages within the remaining wildlands.

The BLM has an opportunity for an important role in perpetuating big game populations through an active program of habitat management, enhancement and protection. Strong support for habitat management is provided by both the Oregon Department of Fish and Wildlife (ODFW) and the Washington Department of Wildlife (WDW), as well as such private organizations as the Rocky Mountain Elk Foundation, Mule Deer Foundation, Foundation for North American Wild Sheep, Shakir Safari and Safari Club International on the national level. State groups such as the Oregon Hunters Association, as well as local sport groups, also provide support.

The BLM actively provides input to the State wildlife agencies for statewide population management objectives, the Bighorn Sheep Plan, and the Mountain Lion and Bear Plan, and will do likewise for the upcoming Deer and Elk Management Plans.

Planning Considerations

- Public demand for both consumptive and non-consumptive use of big game species is increasing.
- As private, state, and other federal agency lands are subject to an increasing level of habitat impacts, BLM lands become increasingly

Pronghorn Antelope

important for the management of big game species.

- Much of the public land is producing below its biological potential for big game, providing many opportunities to improve habitat quality. There is also a need to maintain habitats that are currently suitable for big game.

- Public access to a small portion of BLM lands is of concern to several publics such as hunters and state wildlife agencies. Hunters are concerned because of too little access during hunting seasons, while state wildlife agencies are concerned with too much vehicular access.

- Consolidating BLM lands within crucial ranges through exchange and/or acquisition is important for the management of big game species.

Objectives

The following objectives are in concert with those of the national "Big Game Habitat Strategy Plan."

1. Provide a diversity of habitats for all big game species that are native to the area. Identify important big game habitats and ensure their consideration in resource management plans. Inventory, classify, and prioritize approximately 1.6 million acres of BLM land with respect to their potential to benefit big game.

2. Prepare 477 monitoring plans, 60 activity plans (HMPs, ACECs, CMAs, CRMPs) and 67 cooperative habitat management agreements on big game habitat areas in coordination and cooperation with major landowners, state wildlife agencies, other Federal agencies and private interest groups. Continue to assist state wildlife agencies in developing species management plans. Work closely with ODFW and WDW in developing and revising BLM planning documents and activity plans for big game. Maintain current cooperative agreements with state wildlife agencies. Monitor habitats and projects to evaluate progress and enable redirection of efforts where appropriate.

3. Maintain existing projects and structures developed to protect and improve big game habitat on BLM lands. Provide satisfactory maintenance for 1,632 proposed projects.

4. Implement projects (448 identified to date) to improve big game resource management. Projects include prescribed burns, fertilization, forage plantings and seedings, water developments, fencing, meadow enhancement, thermal and security cover, maintenance, and road closures.

5. Pursue opportunities to make public lands available for transplants of big game species as identified in management plans.

6. Assist ODFW and WDW in establishing reasonable population management objectives for big game consistent with the capability of the land.

7. Support 29 cooperative research studies to improve big game management and effectiveness of habitat improvements.

8. Give high priority to opportunities for acquisition of crucial big game habitat, whether by exchange or purchase. Groups such as The Nature Conservancy, Trust for Public Lands, Rocky Mountain Elk Foundation, Mule Deer Foundation, and the Foundation for North American Sheep can assist with this effort.

Goal

Ensure that native big game species are provided habitat of sufficient quantity and quality to sustain ecologically viable populations as well as their economic and social contributions to the American people.

Upland/Small Game

Background

A wide variety of upland wildlife species and habitats is available on public land in the states of Oregon and Washington. Interest in upland game species such as grouse, quail, chukars, pigeons, doves and rabbits found in forested and rangeland habitats is expressed by both consumptive and non-consumptive users.

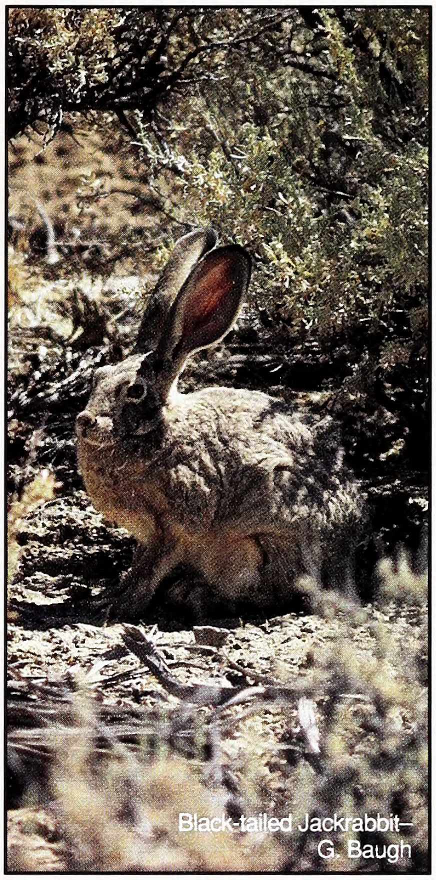
Resource data bases for upland game species vary in quality and quantity within the states since the management emphasis has been on higher profile wildlife species. Additional inventory and monitoring would improve decisions on land use authorizations and provide better information on habitat and population trends.

Planning Considerations

- Habitat changes resulting from land use allocations with a commodity orientation (e.g., grazing and timber harvest) have the potential to directly impact upland game. Some habitat changes have not resulted in adverse impacts. For instance, timber harvest has benefited mountain quail. However, other habitat changes (including historic grazing, timber harvest, and mineral development) have resulted in significant upland/small game habitat loss.
- The cumulative impacts of human population growth and private land use practices is expected to make upland game habitats on public land increasingly important. Interest in public land use policies is expected to continue to intensify as in the past two decades.

Objectives

The following objectives are in concert with the national "Upland Game Bird Habitat Strategy Plan."


Black-tailed Jackrabbit–
G. Baugh

1. Supplement or obtain new upland game inventory data to enable accurate analyses of habitat and population conditions on public land.
2. Integrate the needs of upland game into land use decisionmaking in resource management plans and appropriate activity plans.
3. Cooperate with private sector organizations that express high interest in enhancing and protecting key habitats for upland game.
4. Maintain and construct specific projects that directly benefit upland game habitats.
5. Coordinate with state agencies in transplanting species such as turkey, partridges, quail, and chukars into appropriate habitats that are currently unoccupied and where such transplanting has no conflicts with native species.

Goal

Ensure that upland/small game species on the public lands are provided habitat of sufficient quantity and quality to sustain identifiable economic, recreational and/or social contributions to the American people.

Wetlands & Waterfowl

Background

Wetlands provide many benefits to the public including flood, erosion, and storm damage control; water quality maintenance; outdoor recreation; wildlife habitat; ground water recharge; and research and educational opportunities.

There are 48,000 acres of wetlands and 75,500 acres of lakes and reservoirs in Oregon/Washington. The importance of providing specific management for these wetlands and the resources they support is being realized. In 1986, the United States and Canada jointly developed the North American Waterfowl Management Plan (NAWMP) to establish waterfowl population goals. One year later the BLM developed a strategic plan, which was finalized in 1989 as the Waterfowl Management Plan. This plan identifies resource opportunities and actions required to accomplish national-level goals outlined in the BLM's Fish and Wildlife 2000 plan, and which also provides a framework for wetland habitat management Bureauwide.

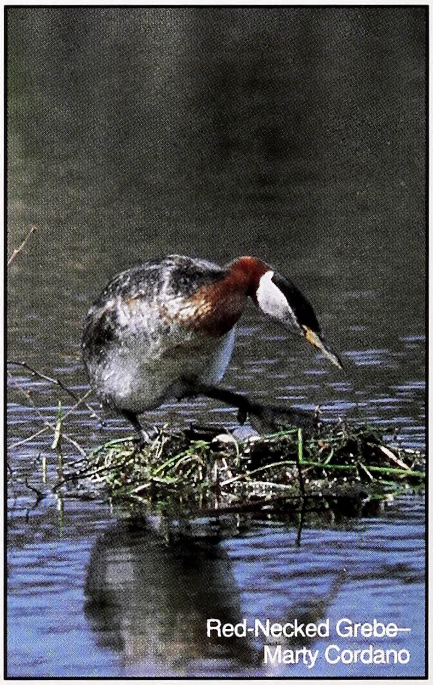
During the course of developing this joint international plan, 229 Waterfowl Habitat Management Areas (WHMAs) were identified on BLM lands; 44 of these areas occur in major waterfowl habitat management areas of concern listed in the North American Waterfowl Management Plan. Half of the 44 WHMAs identified in areas of major concern are found in Oregon and Washington.

Another wetlands action plan that is being developed subsequent to the NAWMP is the Pacific Joint Venture which is a prospectus for managing Pacific Coast Habitat. The purpose of the Pacific Joint Venture is to maintain and enhance the habitat value of areas identified as internationally significant to waterfowl. The involvement of Oregon/Washington BLM in this action plan is specific to the area from the middle-upper Pacific Coast inland to the crest of the Coast Range.

Canada Goose

Planning Considerations

- Since the turn of the century, Oregon alone has lost more than 90% of the Willamette Valley wetlands, almost 80% of the coastal wetlands, and an unknown but significant percentage of those east of the Cascades. Loss of these crucial wildlife habitats has largely been due to agricultural expansion, urbanization, and industrial development.
- The loss of these wetlands with consequent reductions in available nesting, brooding, and migratory habitats for waterfowl and waterbirds is a contributing factor in the long-term downward trends in these populations throughout the entire Pacific Flyway.


Red-Necked Grebe–
Marty Cordano

- Because of competing land uses, the BLM-administered wetlands are not reaching their potential to support waterfowl and other wetland wildlife; at the same time, these public wetlands are becoming increasingly important due to the continued losses of other wetlands in Oregon and Washington.

Objectives

The following objectives are in concert with the national "Waterfowl Habitat Management on Public Lands."

1. Fully implement the Habitat Management Plans currently in place covering the 22 WHMAs in areas of major concern, and develop and implement an additional 21 HMPs to optimize habitat management on remaining BLM wetlands in Oregon and Washington.
2. Acquire 6,320 acres of wetland habitat through exchange, purchase, or donation in or adjacent to nine WHMAs in major areas of concern, and another 77,300 acres in 11 WHMAs outside of major areas of concern.
3. Develop an additional 310 acres in five WHMAs in major areas of concern, and 1,310 acres in 10 WHMAs outside of major areas of concern.
4. Improve 28,100 acres of existing wetland habitat in seven WHMAs falling within the major areas of concern of the North American Waterfowl Management Plan, and on 191,100 acres of wetland habitat in 10 WHMAs outside of major areas of concern.
5. Maintain the existing wetland habitat condition on 2,400 acres in three WHMAs outside of major areas of concern.
6. Conduct inventories on all wetland habitats not already inventoried to determine present condition and management potential.
7. Coordinate wetland habitat enhancement, development, and expansion work with appropriate Federal and State agencies, and public and private conservation organizations.
8. Design and implement a cooperative wetlands enhancement research program.

Tundra Swans–Fred McDonald

Goal

Contribute to perpetuation of a diversity and abundance of waterfowl populations by managing the wetlands and other habitats on those public lands important to the maintenance of this internationally important resource.

Raptors

Background

In the food chain, raptors are biologically important and highly sensitive indicators of environmental change. Their aesthetic and recreational appeal make them highly susceptible to persecution and disturbance by many forms of human activity.

The ecological diversity of Oregon and Washington currently supports healthy yet rapidly declining numbers of ecosystems that sustain a relatively high degree of raptor species richness. For example, 32 (68%) of the 47 species of raptors that regularly occur in 11 western states are found in Oregon.

Public lands provide a major portion of the raptor habitat within the states of Oregon and Washington. The state has 40 key raptor areas (the largest number of all other western states) which support at least 22 (68%) of the state's raptor species. Additionally, public lands in both Oregon and Washington are crucial to the long-term well being of at least five special-status species: the bald eagle, northern spotted owl, peregrine falcon, Swainson's hawk, and ferruginous hawk.

As the human population increases, urban and rural areas expand, and resource interaction alters habitats on private lands, public lands will become even more crucial to the survival of increasing numbers of raptor species. Adequate habitat must, therefore, be retained on public lands if raptor populations are to survive.

The raptor program will be accomplished cooperatively or in close coordination with such organizations as the U.S. Fish and Wildlife Service, the states' fish and wildlife agencies, the Oregon Cooperative Wildlife Research Unit at Oregon State University, The Peregrine Fund, the Oregon Bald Eagle Foundation, The Natural Heritage Program, the National Council of the Paper Industry for Air and Stream Improvement (NCASI), and the BLM's new Raptor Research & Technical Assistance Center located at Boise State University.

Planning Considerations

- Management for raptors can usually be accomplished through an ecosystem management approach designed to maintain a balance of all seral stages well distributed over the landscape. In addition, crucial nest site habitats such as cliffs and nest tree stands need to be identified and protected.
- There is a high level of public interest and support for sustained management of raptor habitat and healthy raptor populations. However, such management can often result in increased conflicts with economic interests and BLM management objectives for other (primarily consumptive) resource values.
- There will be intensified pressures to justify any constraints based upon

Ferruginous Hawk–Marty Cordano

species-by-species and site-specific issues which are placed upon those consumptive resources having an increasing demand. This need for justification will require greater expenditures for more inventories, monitoring, and research that produce data of increased reliability.

Objectives

The following objectives are defined in more detail in the national strategy plan entitled "Raptor Habitat Management on Public Lands."

1. Identify key nesting, migration, and concentration areas for birds of prey on public lands.

2. Implement management programs on key habitats having highly significant raptor populations.

3. Manage, on a continuing basis, raptor habitats on public land by incorporating habitat and prey management considerations in land use and activity plans and through protective provisions in leases, licenses, or permits issued by BLM.

4. For raptor species determined to be in need of recovery and special management (special status species), collaborate with the FWS, state agencies, other concerned organizations, and landowners in management activities that contribute to the recovery of such species.

5. Participate in monitoring activity with other agencies and organizations on public lands.

6. Establish interim population and habitat management objectives for priority species in all resource areas.

7. Develop estimates of: (a) existing populations of priority raptor species for each resource area, (b) habitat preference of priority raptor species, and (c) the amounts and location of existing and suitable habitats for priority species.

8. Establish long-term habitat management goals and objectives for incorporation into existing RMPs through plan amendments when necessary.

9. Participate in all raptor recovery plans (e.g., Peregrine Falcon Recovery Plan and Pacific Bald Eagle Recovery Plan).

10. Conduct research to test the use of silivicultural practices to create stand structures favorable to forest raptors.

11. Use artificial nest structures/platforms to expand raptor populations (e.g., osprey).

Swainson's Hawk Chicks–Lakeview District

Goal

Provide suitable habitat conditions for all birds of prey on public lands through the conservation and management of essential habitat components, including habitat for prey species, especially in areas where birds of prey concentrate during some periods of the year or in important habitats where populations are suppressed.

Riparian Area Management

Altogether, there are an estimated 107,300 acres of riparian habitats in Oregon and Washington. Although riparian areas in Oregon typically cover less than one percent of the land base, they are nevertheless very important for biological diversity including plants, wildlife and fishery resources. In addition, healthy functional riparian areas produce other significant benefits in the form of increases in late summer streamflow, erosion control, forage production, water quality and recreational benefits.

Management and restoration of riparian ecosystems has been given a high priority by BLM. The Oregon/Washington Riparian Enhancement Plan was implemented in 1987, and in 1991 amended to incorporate updated information. Management of riparian habitats is also a crucial component of the OR/WA FW 2000.

Background

Both past and current efforts in Oregon and Washington are showing a number of successful riparian management accomplishments. These have been part of an ongoing effort over the past 10 or more years, but most recently are in response to the goals and objectives stated in the OR/WA Riparian Enhancement Plan. In spite of these successes, overall progress has been slow due to the large number and wide variety of riparian habitats in the two states and the limited funding and personnel available for their management.

The development of inventory, classification, and management objectives for improved riparian management has been emphasized in Oregon and Washington over the past few years. Specific objectives relating to riparian management are now common in RMPs, ACEC management, activity planning and other BLM planning documents. As these become implemented over the next few years, there should be a significant improvement in habitat condition and trend for riparian habitat areas.

Planning Considerations

- There is a high level of interest in riparian resources on public lands, both nationally and in the Oregon/Washington area. The current levels of staff and budget are insufficient to adequately meet the goals and objectives set forth in the OR/WA Riparian Enhancement Plan, or the BLM's proposed riparian initiative for the 1990s.
- Healthy riparian habitats provide highly productive and diverse habitat values of significance to fisheries, wildlife, and botanical resources. Since many public land riparian habitats are in less than satisfactory condition, there is a need to improve their management and to restore or enhance habitat condition on these areas.

Riparian Habitat–Bob Kindschy

- The BLM Director has identified riparian management as one of the highest goals for BLM in the 1990s. To meet these goals in Oregon and Washington, an updated strategy plan will be prepared which will address specific objectives for BLM. This plan will outline staffing and budget needs required to accomplish the goals and objectives for riparian habitats in Oregon and Washington. An important element of this strategy plan will be its habitat management objectives.

Objectives

The objectives listed below are in concert with those of the national strategy plan "Riparian-Wetland Initiative for the 1990s."

1. Improve water quality and riparian habitat condition, as well as watershed conditions associated with these areas, on nearly 656 miles of streams using specific grazing management techniques, enhancement projects, and other appropriate actions designed to maintain, restore and protect riparian habitats.

2. Reach riparian condition and trend objectives established in resource management plans through implementation of activity plans on 75 percent of the riparian areas by 1997, while maintaining a healthy diversity essential for the continued survival of healthy plant populations and fish and wildlife species which require habitat elements provided by these areas.

3. Prioritize the workload needs (e.g., inventory, monitoring, projects, and other work elements) on a basis basis for Oregon and Washington to meet desired objectives within the required timeframe. These will be used to establish budget and staffing priorities for future annual work planning efforts.

4. Provide a public outreach program which includes education, external media, internal training, workshops, meetings, or other appropriate measures to promote a widespread understanding of BLM riparian management efforts and successes.

5. Use land acquisition techniques such as exchange, donation, or purchase as a tool to conserve high value riparian habitats, improve management, and provide maximum protection for significant key areas.

6. Develop/improve partnerships and cooperative management agreements (CMAs) to achieve management objectives on each priority management basin.

7. Organize and use inventory, monitoring and management information in BLM Riparian Aquatic Information Data Summary (RAIDS) database.

Goal

Manage riparian areas to achieve a healthy and productive condition for long-term benefits and values in concert with other land and resource management programs of BLM.

Fisheries Habitat Management

The rivers, streams, lakes, reservoirs and springs on BLM lands in Oregon and Washington provide important habitats for anadromous, cold, and warm water fish. Many of these fish are wild, native species that contribute to important commercial and sport fisheries, other recreational activities (fish viewing, photography, etc.), and scientific and other benefits to society. Some lakes, reservoirs and streams also provide excellent fishing for hatchery fish which are stocked by the states' fish and wildlife agencies to supplement wild fish production where the more intensive fisheries occur (e.g., Hyatt and Chickahominy Reservoirs).

A rich assemblage of anadromous and freshwater species currently occur in the two states: 83 species in Washington, and 106 species (including 36 introduced) in Oregon. Most of these fish are found in freshwater habitats on BLM lands. Numerous marine species also occur in estuaries and the Pacific Ocean adjacent to public lands.

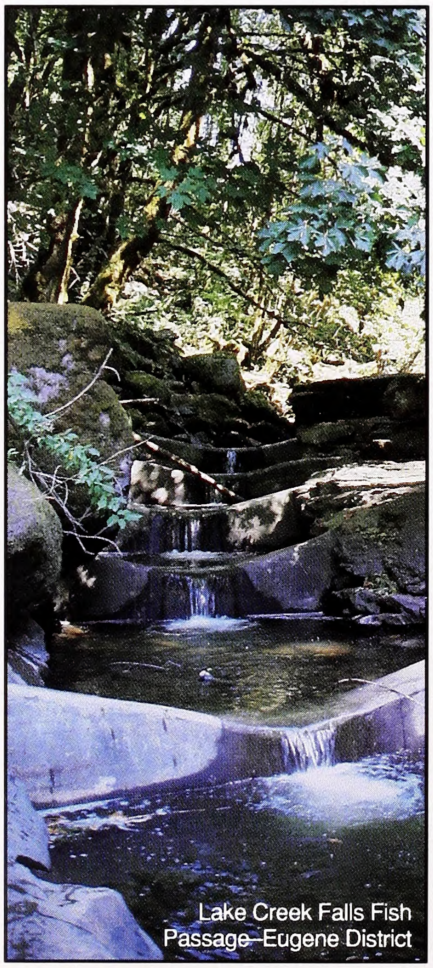
The BLM's fish habitat management program is a "3-pronged" approach that consists of:

- Implementing decisions made in existing land use plans that benefit fish production by protecting, mitigating or improving habitat conditions;
- Constructing fish habitat restoration and development projects that ultimately result in increased populations of wild fish; and
- Cooperating with all other appropriate agencies and organizations at the local level to develop coordinated plans and operations for managing fish habitats.

Management actions designed to improve watershed conditions, particularly those dealing with riparian areas, also can have significant beneficial effects on fish habitats.

In order to improve habitat productivity and to eliminate duplication of efforts, the BLM has maintained close working relationships with appropriate state and federal agencies having management possibilities for fish populations and fisheries. The BLM also cooperates with other organizations interested in fish habitat management and restoration, including Indian Tribes, Oregon Trout, Trout Unlimited, The Association of Northwest Steelheaders, The Nature Conservancy, commercial fishing groups, private timber companies, and the Izaak Walton League of America.

The objectives for the anadromous fisheries and resident fisheries, as described separately in the two sections, are in concert with the national strategy plan "Fisheries Habitat Management on Public Lands."



Lake Creek Falls Fish Passage–Eugene District

Anadromous Fish

Background

Anadromous fish have always been important in Oregon and Washington, particularly along the coast, Puget Sound, and the Columbia River. Although there have been drastic declines in native salmon and steelhead runs due to major habitat alterations, anadromous fish are still important to various commercial, recreational and subsistence fisheries. Many hatcheries are now operated by state and federal fishery agencies to compensate for fish losses (primarily attributed to construction and operation of dams) and to supplement natural production.

Reduced populations of some species is a cause of concern that has resulted in petition efforts for special status protection. In March 1990, the Shoshone-Bannock Tribes of Idaho petitioned the National Marine Fisheries Service (NMFS) for immediate listing of the Snake River sockeye salmon. In May of the same year, Oregon Trout filed petitions requesting threatened status for four stocks of Columbia River salmon: the lower river Columbia River coho, and the spring, summer and fall Snake River chinook. In addition, certain environmental groups are threatening to petition the listings of nearly 100 salmon stocks in the Northwest including many of the coho stocks that use BLM streams on the coast of Oregon.

Habitat management is the BLM's major role in the production of wild populations of anadromous fish. BLM now manages over 1,500 miles of anadromous fish-producing streams in Oregon and about 50 miles in eastern Washington. Most of the important anadromous fish habitat is located in over 1,000 miles of coastal streams in Oregon and the Deschutes and John Day Rivers in eastern Oregon.

Steelhead Trout–Salem District

The BLM has had an active fish habitat improvement program over the last 20 years in Oregon. More than two million dollars have been spent since 1985 to construct 40 instream habitat projects in coastal streams, primarily to benefit populations of wild coho salmon which are at historic low levels. These projects have also enhanced habitat for other salmon and trout species.

Management decisions and actions designed to improve fish habitat conditions are made during the development of land use plans and analyzed under the NEPA process. To the extent practicable, the land use plans must be consistent with officially approved and adopted state, local and Tribal natural resource-related plans and programs.

The BLM cooperates with other state and federal agencies in implementation of their policies and plans. For example, BLM assists the Oregon Department of Fish and Wildlife in implementing their policies (Natural Production and Wild Fish Management) and plans (Comprehensive Plan for Production and Management of Oregon's Anadromous Salmon and Trout: Part I - General Consideration; Part II - Coho Salmon Plan; Part III - Steelhead Management Plan, and approved basin plans such as the Willamette and North Umpqua).

The BLM, where it has management responsibilities, is also assisting the Northwest Power Planning Council and state and federal fisheries agencies in implementing the system plan for the Columbia River Basin.

On January 18, 1990, USFS Chief Robertson and BLM Director Jamison signed a joint USFS/BLM Recreational Policy Statement to "develop and implement programs through internal and external partnerships to improve the quality and quantity of recreational fisheries on National Forests and on Bureau of Land Management lands consistent with resource capability and user demand." The strategies, goals, and objectives of BLM are outlined in that report to foster increased awareness of fishery resources on public lands, cooperation with various recreational users, and overall enhancement of sport fisheries.

Planning Considerations

- There is strong management commitment for managing anadromous fish habitat but there are insufficient numbers of fishery staff to accomplish the proposed objectives.

- Lack of adequate monitoring and current inventory information on stream habitat conditions and trends are hampering development of good plans and some management actions.

- Streams are producing far below their productive capacity and there is a need to protect and restore instream habitat conditions.

- The lack of basin plans and cooperative agreements limits the implementation of rehabilitation projects to protect and restore habitat conditions.

- More staffing and funding are needed to monitor and maintain all completed stream rehabilitation projects at desirable intervals.

- Research information is needed in certain aspects of habitat management and restoration. Research information and monitoring is also needed relative to potential fishery impacts from timber harvest and instream structural developments such as dams.

Objectives

The following objectives are in concert with those of the national "Anadromous Fish Habitat Management on Public Lands" strategy published by the BLM in January 1988:

1. Inventory 2,095 miles of BLM streams for current habitat conditions and use by anadromous salmonids in Oregon and Washington.

2. Improve and expand habitat on 386 miles of stream currently producing far below potential and/or which are not accessible to fish through implementation of 217 instream rehabilitation and nine fish passage projects.

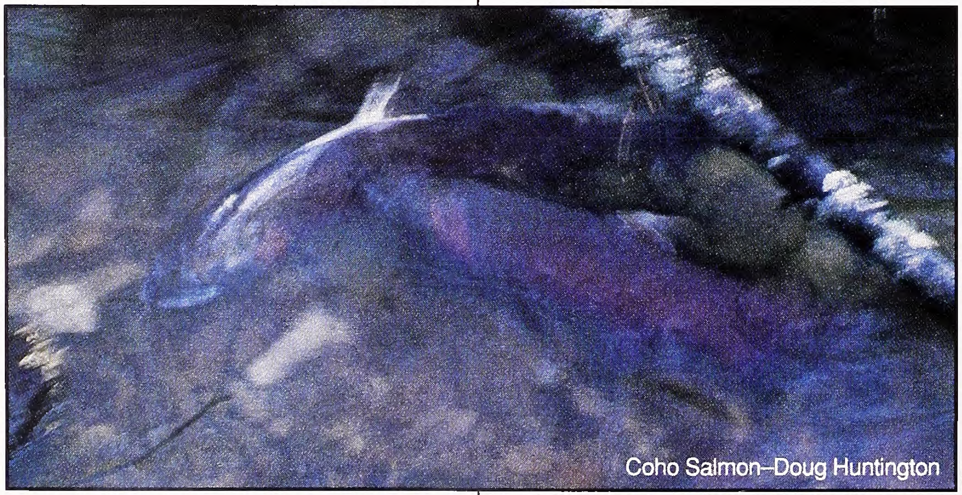
3. Prepare 344 monitoring plans and 54 habitat management plans, and develop 20 cooperative habitat management agreements on high priority watersheds in cooperation with major landowners, government agencies, and private interest groups.

4. Maintain structures in satisfactory condition for 197 implemented and proposed stream rehabilitation projects.

5. Support 12 research studies needed to enhance management and effectiveness of fish habitat improvements.

Goal

Promote and enhance the fisheries potential of anadromous fish streams in the Pacific Coast drainages to further contribute to public use and enjoyment, economic stability of coastal communities, and the recreational and commercial fishing industries.



Coho Salmon–Doug Huntington

Resident Fish

Background

Resident freshwater species include native and introduced trout, whitefish, suckers, sunfish, black bass, catfish, perch, minnows, daces, chubs, sculpins, and carp. Studies for the state of Oregon indicate that over 900,000 anglers spend about $430 million annually in pursuit of their sport, resulting in about $400 million of personal income. About 50 percent of the total fishing effort in freshwater areas is for resident trout and 10 percent is for warmwater game species such as bass and sunfish.

In Oregon, the BLM manages habitat on over 3,500 miles (over 10 percent) of the total 31,000 miles of streams that produce trout statewide. Of the 268,149 acres of lakes and reservoirs in Oregon (about 1,200 bodies of standing water), BLM administers the habitat for 59,000 acres of lakes and 16,500 acres of reservoirs. Many of these flowing and standing waters managed by BLM are important for maintaining wild populations, and in some habitats unique populations, of trout, e.g., rainbow trout in the Deschutes River, small desert streams (redband trout), Klamath River and Jenny Creek. Important hatchery-supplemented fisheries occur in waters such as Crooked River and Prineville, Hyatt, Duncan and Chickahominy reservoirs.

Warmwater game fish have been introduced to many streams, lakes, and small and large reservoirs on public lands. Some of the more notable fisheries occur in Owyhee Reservoir (for crappie), John Day River (for smallmouth bass) and Brownlee reservoirs (several species). The lower reaches of some significant rivers are preferred habitat for introduced warmwater species due to agricultural practices that have resulted in higher water temperatures during summer months.

Nongame fish such as carp, dace, minnows and squawfish can compete with and prey upon young trout, anadromous fish and warmwater species. The cumulative effect on game species is probably minor, except where habitats have been altered by major stream diversions, wildfires or clearcutting without buffer strips (or other removal of streamside shade) which cause substantial increases in water temperature. Such altered habitats favor production and survival of nongame species.

On BLM lands, the greatest adverse effect on habitat conditions in most streams in the eastern areas of both Oregon and Washington has been from undesirable livestock grazing practices. Better management practices and grazing systems implemented in recent years in riparian areas and uplands have resulted in improved vegetative conditions and more productive aquatic habitats.

There have been cooperative efforts to improve habitat for resident freshwater species also. The BLM is cooperating with the Oregon Department of Fish and Wildlife in implementing their statewide "Warmwater Game Fish Management Plan" of August 1987 and "Trout Plan" of November 1987, as well as basin plans as they are completed.

Planning Considerations

- Increased funding and staffing are needed to obtain inventory data for developing plans to restore the productivity for native trout in many streams which have had adverse habitat alterations.

- More monitoring studies are needed to provide managers the necessary information to change current management or evaluate the results of either new practices or plans designed to improve habitats for resident fish.

- Management of resident fish streams can be accomplished best on a watershed basis, making it important to develop cooperative management plans and habitat projects with other concerned agencies, organizations and private landowners whenever possible. This approach will accomplish the most work with available resources.

Redside Shiner—Vale District

Objectives

1. Implement those decisions and actions included in current land use plans for improving habitat conditions for resident fish within established timeframes.

2. Secure access to sport fishing waters on public lands by working with private landowners, other agencies and organizations to identify access problems and solutions according to an agreed schedule with state fish and wildlife agencies.

3. Inventory 1,410 miles of BLM streams used by resident trout in Oregon and Washington.

4. Implement 101 stream rehabilitation projects in Oregon and Washington along resident trout streams that are currently in poor condition and producing below their potential.

5. Prepare 69 monitoring plans and 29 habitat management plans, and develop 24 cooperative habitat management agreements on high priority watersheds in cooperation with major landowners, government agencies and private interest groups.

6. Maintain structures in 112 implemented and proposed stream rehabilitation projects.

7. Support five research studies needed to enhance management and effectiveness of fish habitat improvements.

Successful Angler

Goal

Manage habitat for resident species, including both cold and warmwater species, that spend all or part of their life cycles on public lands and that are of high economic, social, or scientific value to local communities or the nation.

Special Status Species Habitat Management

The Endangered Species Act (ESA) directs federal agencies to carry out programs for recovery of threatened or endangered species (T/E) and the ecosystems upon which they depend. Such management should bring these species and their habitats to a condition where the protective measures provided by the ESA are no longer necessary.

Under the ESA, BLM has the responsibility to conserve species by utilizing all means within its authority to recover listed species on BLM lands. Another responsibility of BLM is to ensure that any Federal action authorized, funded, or carried out by BLM is not likely to jeopardize the continued existence of a T/E species or result in destruction or adverse modification of critical habitat.

BLM has a proactive policy requiring protection and management of special status species to reduce the need to list species. This policy includes federal, candidate, and state listed species and species designated by the State Director as Bureau Sensitive. The Oregon/Washington policy, effective in 1991, includes discretionary protection for regionally sensitive plant and animal species (Assessment Species) in certain categories identified by state fish and wildlife agencies and Heritage Programs. The goals that apply to special status animals (including fish) and plants are listed to the right.

Objectives to accomplish these goals in Oregon and Washington are divided into four components: special status animals, plants, fish, and habitat/natural areas. To accomplish the objectives for T/E species and habitat management, the BLM coordinates and consults when appropriate with the Fish and Wildlife Service, National Marine Fisheries Service, concerned state agencies and private organizations.

The state of Oregon has legislation that provides for the protection, listing and management of both special status animals and plants, whereas legislation concerning T/E species in the state of Washington applies only to animals. The numbers of special status species documented or suspected to occur on BLM lands in Oregon and Washington are listed on Table 3. Appendix E lists the species by categories.

In addition to species management, the BLM in Oregon and Washington has recognized the need to protect and conserve special fish/wildlife/botanical resources and their natural systems. In cooperation with Natural Heritage Programs in each state, OR/WA BLM has formally designated 98 areas as ACECs which have key botanical, wildlife or fishery values (see Appendix G).

Subalpine Habitat–Todd Thompson

Goals

1. **Listed Species**. Enhance or maintain critical habitats and increase populations of T/E plants, fish and wildlife on lands managed by BLM and restore species and populations to historic ranges, consistent with approved recovery plans and BLM land use plans, after consultation with Federal and state wildlife agencies.

2. **Candidate and Bureau Sensitive Species**. Manage habitats to maintain populations of plants and animals at a level which will avoid endangering the species and/or the need to list the species as T/E by either State or Federal governments.

3. **Special Habitats**. Conserve rare, vulnerable, and representative habitats, plant communities, and ecosystems.

Special Status Animals

Background

Pressures from a growing human population and changes in public attitudes toward traditional wildlife management have placed increased emphasis on special status species. Habitats on private lands, once secure for wildlife, are now often threatened with alteration. At the same time, competition between commodity and non-commodity resources continues to escalate on public lands. These two trends have had a bearing on the public's increased interest in nongame species which traditionally have been given lower management priority. The overall effect of the habitat decline coupled with increased public interest has mandated a dramatic shift in Federal management emphasis to special status species.

The first step in conservation of a species is defining its occurrence, its status, and quality and quantity of its habitat. Although inventories have been completed for a few species, most of the habitat of the special status species has not been defined nor have monitoring studies been conducted to determine population and habitat trends. Research aimed at answering specific management questions is another component of the information gathering process. These are the data gathering methods that managers need to make the best resource decisions.

Many of these specific inventory and monitoring needs are identified in BLM planning documents. One specific case is the northern spotted owl for which the BLM, through public involvement in land use planning, has committed to conduct extensive monitoring studies. During FY90, there were 85 biologists and temporary personnel assigned, many of them almost full time, to studies of this species. In addition, for FY91 about $1.5 million dollars is being spent on research and monitoring of the northern spotted owl, and all predictions for the future indicate this effort will increase. Meanwhile, many needs for other special status species have been foregone because management has been forced to expend all available resources on this one species.

Spotted Owl–Marty Cordano

Recovery and management plans, including cooperative agreements with other agencies such as the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service and others, provide the framework for specific habitat improvements on public land. Acquisition of key habitat can be a component of a recovery or management plan.

Presently, the BLM is cooperating with the USFWS and other agencies in the implementation of recovery plans for the bald eagle, peregrine falcon, Borax Lake chub and Columbian white-tailed deer.

Planning Considerations

- The workload associated with threatened, endangered and candidate species will continue to grow dramatically. Inventory and monitoring needs for the northern spotted owl will specifically increase now that the species is listed as threatened. In addition, monitoring and inventory needs of the other special status animals in Oregon and Washington and the workload in research, acquisition, and management will require a significant number of additional BLM specialists in wildlife, fisheries and botanical disciplines as well as more support personnel.
- For many special status animal species, there have been no inventory and monitoring studies completed. Other species for which there are limited inventories will require more detailed information to help meet some of the complex resource needs. The ultimate goal of the BLM is to either: a) manage species so that they never reach the need to be federally listed; or b) recover them to the point where listing is no longer necessary.
- Recovery of some special status animals could be hastened by improving their habitat. For other species, where habitat is adequate, reintroductions could hasten recovery.
- Habitat Management and Recovery Plans, the blueprints for reestablishment of species, are lacking for most special status species and their habitat.
- The BLM could significantly improve and maintain habitat for special status species by acquiring key habitats.
- Crucial questions important to management and decisionmaking can only be answered by needed research studies.

Objectives

1. Conduct inventories on 7.8 million acres of public land to determine occurrence and habitat condition of special status animals; conduct monitoring studies for 609 plans.
2. Complete 137 development projects to improve habitat for special status animals.
3. In coordination with appropriate state and Federal agencies, complete 25 reintroductions of listed species on public lands.
4. Complete 47 plans (Habitat Management, Recovery, Cooperative Agreements) to improve conditions for special status animals.
5. Acquire 33,000 acres of key habitats for special status animals.
6. Complete 133 research studies to answer management concerns for special status animals.

Snowy Plover–Coos Bay District

Special Status Plants

Background

Oregon and Washington comprise one of the most botanically diverse areas in the nation. The unique geology and varied climate of the region is responsible for the occurrence of a large number of endemic plants. Unfortunately, some of this rich diversity has already been lost. Since the mid-1800s, there are 35 plant species in Oregon and 18 in Washington that have become extinct. Another 43 plant species in the Oregon/Washington area, nearly half of which are known to occur on BLM lands, are predicted to become extinct before the year 2000. Currently there are 89 special status plants known to occur on Oregon/Washington public lands and another 67 suspected.

Potential threats to species existence include human related actions such as pressures from external land use (e.g., land conversions), and potential agency actions for other resource uses (e.g., recreation, surface disturbance). Other threats are related to natural factors such as plant succession (in some cases augmented by such actions as fire suppression and flood control), seed or plant predation by insects, infertility, limited habitat expansion opportunity, and small population size and distribution. Management must therefore address both human and natural factors contributing to species conservation.

Special status plants managed by the BLM in Oregon and Washington include federal listed (Malheur wire-lettuce and Bradshaw's desert-parsley), federal proposed, federal candidate (80 species), state listed plants (13 species, which are also federal candidates), and 7 Bureau Sensitive species. Federal and state listed species have been determined to be in danger of extinction throughout their entire range, and protection and implementation of recovery plans are the priority management needs for these species.

Gentners Fritillaria–Don Eastman

Federal proposed species have been determined to be biologically appropriate for listing but are in a period of public review and have a need for interim management.

Federal candidate plants are species that appear to be appropriate for listing but are still under federal review. These species are in need of basic inventory to determine abundance, distribution and threats as well as research and studies to determine basic biological requirements, and monitoring to determine population trends. It is critical that the BLM manage for the recovery of federal candidate species to eliminate the need for future listing. Other plant species considered to be in danger of extinction, either in the state or throughout their range but which have not yet received official recognition, are known as Bureau Sensitive species and need management attention as sensitive species similar to that provided for Federal Candidates. In addition to these species requiring active management, BLM OR/WA policy (effective in 1991) provides for discretionary protection of regionally sensitive species classified by BLM as assessment species. This policy is aimed at protecting populations of these vulnerable species whenever possible in conducting activities for BLM programs.

In 1991, OR/WA had one of the most active botanical programs in the BLM with 17 permanent full-time positions devoted to botanical resource management. In addition to conducting inventories and recommending mitigations for other program projects, the BLM's botanical staff is monitoring federal candidate species and Bureau Sensitive species. Two special status plant HMPs have also been completed. Two districts (Burns and Eugene) are pursuing recovery activities for the two federally listed plant species known to occur on OR/WA BLM lands in cooperation with the U.S. Fish and Wildlife Service, Oregon Department of Agriculture, Oregon State University and the Berry Botanic Garden. Challenge cost share activities with the Oregon Department of Agriculture, the Berry Botanic Garden, The Native Plant Society of Oregon and Washington, and The Nature Conservancy are being utilized to elucidate taxonomic complexities of species, conduct extensive inventories, establish monitoring, determine habitat associations and evaluate threats.

In order, however, to conduct an effective species management program, there is a need for more botanists at all levels of BLM in Oregon/Washington. Also vital to the program is coordination with other agencies and groups. Formal relationships already exist with the U.S. Fish and Wildlife Service through the Endangered Species Act; and with the Washington Department of Natural Resources, The Center for Plant Conservation and the Nature Conservancy through memoranda of understanding and cooperative agreements. An MOU with the Oregon State Department of Agriculture and cooperative activities with USFS towards managing mutual species need to be pursued in the near future. Additional coordination with organizations such as colleges and universities, native plant societies and other conservation organizations also need to be explored while maintaining existing associations.

Planning Considerations

- Impacts to habitats of special status plants will increase over the next decade, making their populations on public lands even more vital to the continued existence of many plant species.
- Conservation and recovery of special status plant species on public lands will require greater emphasis for the following:
  - Acquiring basic information on distribution and habitat requirements.
  - Determination of kind and degree of threats.
  - Monitoring and inventory data for the development of sound plans and management actions.
  - Development and implementation of species or habitat management plans.
- There are insufficient numbers of qualified personnel in botany disciplines and also insufficient funding to accomplish the BLM's goals for protecting and managing special status plants.
- As threats to special status plants increase, acquisition of lands containing populations of some species will become more important to enhance conservation of those species not well protected.

Objectives

1. Conduct and analyze necessary inventories for over 2.5 million acres and 141 research and study efforts to ensure that BLM has the information required to conserve and recover the special status plant species on the public lands. Give special attention to conducting extensive inventories prior to development of resource management plans.

2. Organize and use inventory, monitoring and management information through a standardized data base.

3. Identify actions and funding necessary to conserve, recover, and continuously maintain special status plant species on the public lands through the planning process (including Resource Management Plans, Habitat Management Plans, Recovery Plans, Allotment Management Plans and other plans as appropriate).

4. Develop and implement 141 plans involving species and habitat management.

5. Prepare and disseminate reports on findings from BLM monitoring, studies, and management.

6. Through the NEPA process, evaluate effects of proposed actions on special status plant species and implement necessary mitigation and compensation measures to ensure the actions will not jeopardize these species. Schedule necessary surveys at the appropriate time of year to locate and identify special status plants.

7. Ensure that management actions necessary to protect, conserve, and recover special status plant species are implemented. Monitor effectiveness of these measures. Develop and implement a system to track these actions.

8. Implement a system to monitor and evaluate population trends and habitat conditions for special status plant species as a result of mitigations, as well as under natural situations.

9. Increase the awareness of special status plant species' management and biological requirements to improve the support of both the public and BLM personnel. This will be accomplished through internal and external presentations, publications, news stories, displays, educational opportunities, and interpretation.

10. Establish means to assure continued maintenance of viable populations of all recovered special status species.

11. Develop and maintain a list of sensitive plant species for Oregon and Washington.

12. Seek to acquire appropriate lands having populations of species not well protected under existing ownership.

13. Collaborate on a continuing basis with the National Park Service, the Forest Service, the Fish & Wildlife Service, the two states, and private groups to ensure that special status plants are protected and that management is consistent across jurisdictional boundaries.

14. Develop criteria and training to qualify personnel in carrying out special status plant species program. The long-term objective is to have botanists in all districts and all resource areas.

15. Develop or seek and implement advanced training opportunities for botanists to keep up-to-date with trends in ecology, taxonomy and conservation biology including attendance at professional conferences and college course work.

Special status Fish

Background

Numerous aquatic habitats located on BLM lands in the arid areas of both states are often limited in size (e.g., small springs and creeks), fragile in nature, and therefore easy to alter to the detriment of native species occurring there. Because of this and past deleterious changes in aquatic ecosystems, most of the special status fish species can be found on BLM lands. For example, in Oregon six of the seven fish species officially listed as either threatened or endangered by the U.S. Fish and Wildlife Service, as well as 11 of the 16 candidate species, are found on BLM lands. Additionally, three of the four fish species classified by the Oregon Department of Fish and Wildlife as threatened or endangered, and 12 of the 21 fish species listed as sensitive, inhabit waters on BLM lands.

Native fish have been given special status for two main reasons: their small populations in restricted habitats that were threatened by different activities (e.g., Foskett speckled dace, Borax Lake chub) and, significant habitat alterations and/or introductions of other species (e.g., Warner sucker, Lost River sucker). Despite incomplete inventory data for some species and a good understanding of the life history and habitat requirements of other species, BLM has been cooperating with concerned agencies and organizations in the development and implementation of recovery plans for certain listed species (i.e., Borax Lake chub, Warner sucker), and taking preventive measures to avoid listing of candidate species (e.g., redband trout.

Obviously, BLM has an important role in managing the ecosystems of some of these unique species that have evolved in desert environments often with harsh conditions that many species cannot tolerate.

Planning Considerations

- If the present trend continues, greater pressure from various agricultural and energy developments can be expected to accelerate management efforts needed to fulfill BLM mandates under the ESA.

- Inventory data are needed to prepare plans and make day-to-day management decisions that will help protect and maintain the habitats of threatened, endangered and candidate species in satisfactory condition.

- More funds and personnel will be required to adequately monitor actions and plans to ensure the recovery of listed species and to prevent the need to list candidate species.

- Acquisition of key habitat areas may be one of the most important opportunities for ecosystem conservation where BLM now administers most of the habitat of some species.

Objectives

1. Inventory 648 miles of streams and 3,857 acres of lakes to determine habitat conditions, use and distribution of special status fish.

2. Conduct monitoring activities to evaluate the results of the plans, reintroductions, and project work, and to determine any trends in ecosystem conditions.

3. Develop 28 management plans (HMPs, ACECs) and 31 cooperative agreements that will help prevent special status fish from becoming listed.

4. Complete 69 habitat development projects designed to improve the productivity of special status fish.

5. Conduct 16 research studies to obtain data needed to answer key questions concerning habitat use and management of T/E and candidate species.

6. Acquire 1,700 acres of key habitats of four special status species.

Lahontan Cutthroat Trout–ODFW

Special Habitats
Natural Areas

Background

The Pacific Northwest is among the more biologically diverse regions in North America. Oregon and Washington comprise most of this region and together represent a land mass greater than any other state except Alaska and Texas. Hundreds of miles of coastline, coastal and interior mountains, interior valleys and intermountain desert are included in both states. Natural vegetation varies with climate and geology and ranges from coastal redwood forests to alpine meadows and high desert shrub steppe.

The fundamental purpose of the Oregon/Washington natural area program is to preserve both representative and unique examples of natural ecosystems and native species, including special status species. Natural areas, including Research Natural Areas (RNAs), are managed as Areas of Critical Environmental Concern (ACECs). ACECs are designated under the authority of the Federal Land Policy and Management Act (1976) to protect natural resources, systems, or processes that have more than local significance or have qualities that make them rare, irreplaceable, exemplary, or vulnerable to adverse change. RNAs have natural features that are protected as ACECs and managed for the purpose of research and education. They are particularly important in providing the baseline information needed for BLM monitoring of intensively managed areas. Policy requires all natural areas that are classified be designated as ACECs. A second designation such as RNA is permitted when clarification of management emphasis is needed. Conversion of all proposed natural area designations to ACEC should occur as new Resource Management Plans are prepared.

Much remains to be done in the program to preclude important natural features from being lost to urban and agricultural development and consumptive resource management. Through a cooperative effort of federal, state, and private organizations (spearheaded by the Interagency RNA committee) there have been 194 natural areas designated or proposed for designation. As of October 1990, 100 areas comprising 363,643 acres having significant fish, wildlife, and botanical values have been designated as ACECs, and numerous other areas are under consideration for designation. Approximately 2.8 million acres are still in need of inventory.

Nearly half (46%) of all natural areas need projects to achieve management objectives. Only 21% have approved activity management plans which provide adequate management direction and only 19% are monitored. Only 20 studies such as taxonomy and ecology have been completed; however, an additional 99 have been recommended by resource specialists. These needs must be satisfied over the next ten years if the resources represented in natural areas of Oregon and Washington are to be effectively managed.

Included in this program category are rare or representative habitats, plant communities and ecosystems that should be considered for natural area designation and/or are candidate ACEC areas. Areas are selected from both aquatic and terrestrial environments and represent variability in ecological provinces across the states of Oregon and Washington, as well as along elevational gradients. These areas are important to the long-term maintenance of biological diversity. Old-growth ecosystems are considered because this successional stage stand condition is of special concern and particular significance to many plant and animal species.

Although many of these areas benefit both wildlife and native plants, separate financial planning sheets have been prepared for the habitat of animals and plants due to the significance of the species each support.

Planning Considerations

- Population growth in the Pacific Northwest will increase demands on the natural resources found on public lands and could threaten the natural biological diversity of Oregon and Washington.

- Cooperative protection and management of natural areas on public and private lands will be necessary to conserve representative examples of this diversity.

- Natural areas of local habitats are needed to determine healthy ecosystem functions and processes for application in restoring areas altered by human use and improving management of similar habitats under multiple use management.

- Management of ecosystems (e.g. old-growth forest , wetlands, riparian, and native sagebrush steppe) is expected to be a high priority from both a public and management standpoint for the upcoming decade. However, there is insufficient information on the natural functioning of these ecosystems to protect and manage their natural ecological balance and species diversity. Additional research into biological diversity and the function of these ecosystems is needed in designated ACECs, RNAs, and other specialized classifications to enable accomplishment of the objectives for which they are to be managed.

Objectives

1. Identify, through inventory or interagency coordination, those natural areas on public lands necessary to fill "gaps" in the Oregon and Washington Natural Heritage programs in order to protect unique environments and/or key populations of special status plants and animals.

2. Designate these natural areas as ACECs, and RNAs where appropriate, through the planning process.

3. Collect ecological data, including biotic and abiotic, for both baseline conditions and natural trends.

4. Develop and/or update ACEC management plans for each designated ACEC.

5. Implement the management actions prescribed through ACEC plans.

6. Protect the full range of genetic diversity for plants and animals on public land ecosystems (e.g., old growth forest, wetlands, riparian, and native sagebrush steppe) and on other unique habitats such as cliffs, talus, caves, meadows, lakes, headwaters, playas, lithosols, ash deposits, and serpentine soils. This includes not only the most obvious vegetation types, but also key habitat components such as snags, dead or down woody material, light, moisture, soil structure, and processes such as fire, flooding, and migration.

7. Develop and implement a system to monitor and evaluate whether objectives for natural areas are being met.

8. Increase the awareness of natural area values to management, BLM staff, university personnel, and the public through preparation of guide books, publications, presentations, interpretation and education.

9. Actively encourage scientists and teachers to utilize natural areas for education, studies, appreciation and research.

10. Continue participation in the Pacific Northwest Interagency Research Natural Area Committee and coordinate with other agencies and interested publics in inventory, designation, management and publicity on ACECs.

11. Acquire lands needed to protect special habitats or augment existing ACECs.

12. Collaborate on a continuing basis with the National Park Service, the Forest Service, the Fish & Wildlife Service, the two states, and private groups to ensure protection of the best natural plant communities and to ensure that management is consistent across jurisdictional boundaries.

Internal Coordination & Support

As we become more aware of the interrelationships and affects of human activities in maintaining biological diversity, coordination among our programs becomes increasingly important. One of the principal ways that fish, wildlife and botanical resources are maintained and managed in a multiple use setting is by working in a constructive, cooperative and interdisciplinary manner with other BLM programs to ensure that the needs of these resources are considered in all resource management plans, activity plans of other programs, environmental assessments and project work. Such coordination is valuable in numerous ways. It allows staff of biological programs to provide data important to the decisionmaking process; helps to identify and summarize potential effects of other programs and activities on these resources; encourages program personnel to continuously be aware of their responsibilities and opportunities to protect and enhance fish/wildlife/botanical program resources whenever feasible in implementing on-the-ground activities; and is also an important tool in avoiding and resolving potential conflicts in multiple use situations. Coordination is also vital in providing both information and opportunities for public environmental education and recreation in concert with Recreation 2000 goals and objectives.

The ability of commodity-oriented programs such as range, minerals, or forestry to effectively manage their resources in an ecologically balanced manner directly affects the well-being of those resources shared by non-commodity resources such as plants and most species of wildlife.

Increases in staffing and activities needed to implement OR/WA FW 2000 will also necessitate more staff and coordination with administrative services such as personnel, procurement, automatic data processing, and public affairs.

Botanical Field Day–Salem District

Internal coordination and support to other programs and activities is vital to the fish/wildlife/botanical program because the collective activities of other programs are affecting or have the potential to affect almost every acre of habitat in Oregon and Washington. For example, based on existing land use plans, approximately 1.9 million acres of commercial forest land (of 2.5 million acres of total forest land) are scheduled for intensive timber management practices and about 14 million acres are grazed by livestock in the two-state area managed by BLM. The timber and livestock grazing programs require the greatest amount of support, but significant coordination is also necessary with other programs such as recreation, lands (for acquisitions/exchanges), minerals and energy, and soil and watershed conservation.

The challenge for BLM managers is to ensure that activities of all users occur in a manner that realizes maximum total benefits from all uses. Resource development and use activities can often be designed and implemented with little long-term adverse impact and sometimes positive benefits to fish, wildlife and botanical resources. Accurate, up-to-date species and habitat information is essential in this respect.
Adequate monitoring of major management actions thus becomes a key role of the biologist/botanist during the 1990s to help achieve many of the goals and objectives of this OR/WA FW 2000 Vision.

Planning Considerations

- Demands on public land resources to meet human physical and recreational needs are increasing in an atmosphere of accelerating concern for the environment.

- Existing BLM practice too often focuses management on a program by program basis with project specific coordination among other resources through the NEPA process, without coordination and innovation to adjust traditional management to attain a healthy balance of recreational and commodity uses along with sustained viable populations and communities of fish, wildlife, and plants.

- Managers are responsible for enforcing many laws, regulations and policies for a number of programs, sometimes with actions which appear conflicting. Opportunities for incorporating fish, wildlife and botanical program objectives into the activities of other programs need to be sought and implemented through improved internal coordination, communication, and support.

- Implementation of Fish and Wildlife 2000 will create an increased demand on BLM support functions including administration (personnel, procurement, volunteer coordination), cultural resources, information resource management (including computer systems such as GIS), realty, engineering, and environmental coordination. It will also require expanded resource management activity and coordination from range, forestry, minerals, soil-water-air, recreation, and fire management.

Objectives

1. Ensure that fish, wildlife and botanical resources receive full consideration in all environmental assessments, land use plans, activity plans and activities of other BLM programs.

2. Provide information to managers on desired habitat conditions for species and/or biological diversity to maintain functioning ecosystems for their use in the decisionmaking process. Specific objectives for managing priority habitats should be included in plans as they are developed at the district and resource area levels.

3. Ensure that other programs are aware of the legal requirements to give priority to "critical" or "essential" habitats, especially when conflicts arise with other land uses. No activities should take place that might cause any plant or animal species to become extinct or need the special protection of the candidate, threatened or endangered species classification under the ESA.

4. Schedule interdisciplinary workshops and training for managers and other resource specialists to promote their understanding of FW 2000 goals and objectives, as well as their role and responsibilities in helping to achieve them.

5. Whenever practical, use interdisciplinary teams and cooperative projects to avoid duplication, reduce costs, and promote support for the fish/wildlife/botanical program. Such cooperative efforts would be most useful in planning, monitoring, maintenance and project development.

6. Create and utilize interdisciplinary teams to develop and implement new approaches to recreation and commodity use management which is in balance with the needs of human, and of wildlife/fish/botanical resources.

7. Periodically assess support staff needs and facilitate additional positions and capabilities to keep pace with expanding demands resulting from FW 2000 and internal coordination between programs.

Goal

Increase the total value of multiple uses of public lands, and strive to sustain viable populations of fish, wildlife, and botanical resources by maintaining or improving their habitats through full consideration of these resources in other BLM programs.

Public Outreach

Background

The fish/wildlife/botanical resources on public lands are under pressure due to a rapidly growing population, increased consumptive demands (primarily for forage, timber production, and mineral extraction), and increased demands by non-consumptive users (i.e., recreationists). All of these factors make it critical for BLM to develop effective public outreach programs.

The public outreach challenge for BLM in implementing the OR/WA Fish and Wildlife 2000 program includes not only identifying key areas of interest and opportunities that exist but also determining who is affected and how. Once this identification process is complete, ways of addressing the objectives can be determined. This process must occur primarily at the field level, but certain actions can be initiated statewide to begin the process.

Planning Considerations

- The Bureau of Land Management needs to better communicate its ability to properly manage fish, wildlife, and botanical habitats in a multiple-use framework.
- There is a lack of understanding by a variety of publics, user groups and organizations of the value that their public lands contribute to the maintenance and enhancement of viable populations and the biological diversity of fish, wildlife, and plant species in Oregon/Washington states.
- There is a low (but increasing) level of support and funding for the BLM to carry out its mission of ensuring fish, wildlife, and botanical resources for future generations.

Goals

1. Demonstrate that BLM is staffed with professional resource specialists and managers who have the expertise and ability to effectively carry out the BLM's mission.
2. Promote full recognition of public land users and constituents of the importance of public lands in providing habitat for fish, wildlife and the botanical resources.
3. Obtain public cooperation and support for the BLM to carry out its mission of ensuring fish, wildlife, and botanical resources for future generations.

Yaquina Head Tide Pools–Salem District

Objectives - Goal 1

a. Encourage BLM personnel (fish, wildlife and botanical specialists and managers) to:

  - Participate in activities of organizations that have an interest in biological and botanical resource management;
  - Become actively involved in community activities and services such as civic organizations;
  - Submit papers, articles, and general publications to professional journals, the BLM News, and other media outlets; and
  - Respond to requests or initiate opportunities to speak at meetings.

b. Pursue opportunities for tours and on-the-ground demonstrations of the successes of the BLM's fish, wildlife and botanical programs.

c. Involve people from the public sector in the development of habitat management plans and other planning efforts which affect the fish, wildlife and botanical resources.

d. Conduct surveys of the public to determine public interest and uses of fish, wildlife, and botanical resources for consideration in management.

Objectives - Goal 2

a. Develop a series of publications available for public distribution that focus on BLM goals and management of public land habitats for wildlife, fish or botanical species or on a particular grouping of them.

b. Incorporate biologist/botanist-identified mitigation opportunities in all environmental assessments.

c. Establish an environmental education program and speakers forum involving biologists and botanists at the state and local levels. Specifically target youth groups through Saturday Academy programs, science classes, and school districts.

d. Develop a series of displays covering the entire spectrum of the fish/wildlife/botanical program that will be available for specialists and line managers for presentation at such events as fairs, exhibits, and professional society meetings.

e. Identify specific areas that will demonstrate the significance of the public land habitat in the context of a multiple-use framework.

f. Arrange field tours for advisory groups and other interested constituencies to view those demonstration areas.

g. Increase communication with the public through professional and informal presentation, television news and documentaries, videos, major and local newspaper features, and articles in both professional and popular literature.

h. Maintain/increase awareness of fish/wildlife/botanical resources to biological diversity by promoting participation in BLM activities and presentation of accomplishments through meetings of professional organizations, universities, classes, and seminars.

Objectives - Goal 3

a. Develop a process or action plan at the state and district level that specifically addresses those objectives from goals 1 & 2 above. Implement these action plans over a specified period of time and determine ways to measure their success.

b. Continue to pursue and expand partnerships through cost share opportunities.

c. Develop a list of cost-share projects that can be distributed to BLM partners including donation and volunteer opportunities for resource-benefiting projects.

d. Expand public presentations to all segments of public land users, to include demonstrations of balanced management of resources for human use benefiting wildlife and botanical resources. Utilize such forums as meetings of Cattlemen's Associations, Society for Range Management, Oregon Timber Association, Association of O&C Counties, Minerals Association, and Oregon Four-Wheel Drive Association.

e. Increase recruitment targets and utilization of volunteer programs to enhance public understanding of BLM's land management while accomplishing definable program activities.

Effective public outreach and volunteer coordination in each district should provide for:

- **Field Tours/Open House Events:** District coordinators should organize and set up field tours or open house events and invite various commodity, conservation, and volunteer organizations. Volunteer opportunities should be discussed and invitations extended to these groups for their participation in projects of their interest.
- **BLM News/Weekly Highlights:** Stories about volunteer activities need to be submitted on a regular basis to keep internal audiences informed; regular submissions to various news media of volunteer activities should also occur.

Volunteer coordinators should write and submit stories for publication, to serve as a publicity tool for BLM and as a way to generate increased public participation in fish, wildlife or botanical enhancement projects.

- **Enhancement of Community Volunteer Programs:** A list of volunteer opportunities from community organizations needing volunteer assistance should be prepared and distributed to BLM personnel. This would encourage BLM employee volunteerism, and at the same time build rapport with many organizations and groups that are not aware of volunteer opportunities on public lands. Additionally, a special effort would be made to include those volunteer opportunities gathered from organizations participating in Field Tour or Open House functions. These efforts would not only help expand the volunteer program, but also increase BLM employees receptiveness to using volunteers due to their own identification as a volunteer in an outside organization. At the same time, goodwill would be extended and contact made with many organizations not currently involved in cooperative work with BLM.

- **Better Recognition and Awards:** Recognition of volunteers results in a dramatic increase in the number of participants in BLM volunteerism over the long term. Writing and submitting nominations for volunteer-related awards, however, is time consuming. Deadlines often occur at difficult times with short lead time. Also, current staffing provides allowances for taking advantage of only two or three awards programs, while there are dozens of award programs or ways of recognition actually available to create goodwill and positive publicity for the BLM. With adequate staffing, there should be greater numbers and kinds of nominations for volunteer-related awards programs. Articles should be written and published identifying groups and individuals who have participated in the BLM volunteer effort and recognizing their accomplishments.

Water Catchment Construction—Fred McDonald

- **Improved Volunteer Recruitment:** More effective volunteer recruitment should be achieved by development of (1) a list of conservation, commodity and volunteer organizations, (2) MOUs or agreements that promote increased volunteer participation, and (3) a list of contributions to a statewide catalog. These approaches will help marketing and public outreach that is vital to maintaining a well supported volunteer program.

- **Academic Institutions:** The rich and varied biological resources on BLM lands provide many untapped study opportunities. Resource management problems and questions faced by BLM field staff can benefit from academic research, studies, and class exercises while assisting students and faculty in their scientific pursuits. Increased communications with academic institutions through guest lectures, participation in planning activities, field trip opportunities and publications can increase academic interest in conducting research or class exercises on BLM lands. The BLM volunteer program can provide logistical support to conduct such work. In addition, this may provide opportunities for students to be employed through the BLM's Coop-Education program while working on their degree program and could result in a permanent career with BLM. Specific seasonal tasks may be accomplished by participants in the Student Conservation Association (SCAs) portion of the Volunteer Program.

- **Research:** Opportunities for initiating research should be recognized and considered for the BLM's Cooperative Research Center located in Corvallis, Oregon.

Great Blue Heron–Marty Cordano

Profiles

These profiles describe specific opportunities to implement **Fish and Wildlife 2000** in BLM Districts in Oregon and Washington. Each profile details local goals and objectives, and includes a list of on-going projects, highlighting available volunteer and partnership possibilities.

The spectrum of potential for **Fish and Wildlife 2000** in the Pacific Northwest includes everything from anadromous fisheries and raptor monitoring to riparian rehabilitation and special status plant inventories. BLM's opportunities to manage wildlife habitat are as diverse as the public land itself.

Crosby's Buckwheat–
P. Eastman

Roosevelt Elk–Michael Weeks

Profile of Oregon/Washington District Programs

Federally-administered Lands in Oregon
Oregon: 32,211,219 acres
(52.3% of state's total)
Washington: 12,654,326 acres
(29.6% of state's total)

BLM-administered Lands in Oregon
Oregon: 15,694,796 acres
(about 25% of Oregon)
Washington: 320,859 acres
(less than 1% of Washington)

Offices - Oregon State Office,
10 District Offices, and
4 detached Resource Area Offices

Oregon State Office
1300 N.E. 44th
Portland, OR 97213
(503) 280-7026

Total Research Natural Areas - 39

Total Habitat/Species Management Plans Implemented (Statewide) - 74

Total Fish/Wildlife/Botanical Related ACECs - 100

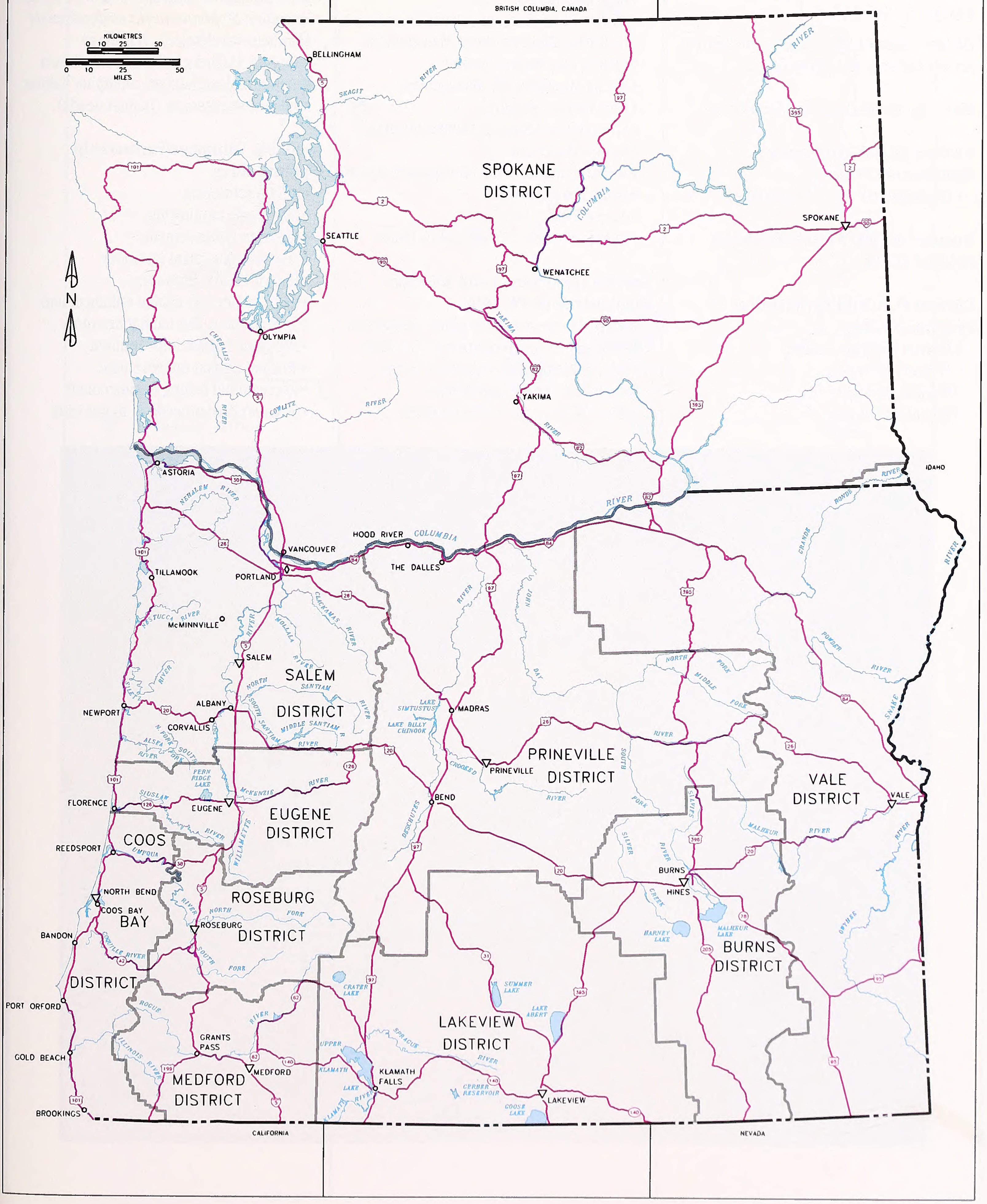
Current Fish/Wildlife/Botanical Program Staffing
Botanist
T/E Biologist
Wildlife Biologist (2)
Fisheries Biologist
Riparian Specialist (2)

Current State Office Partnerships
- U.S. Fish and Wildlife Service
- Oregon Department of Fish and Wildlife
- Oregon and Washington Natural Heritage Programs
- Oregon Department of Agriculture
- U.S. Forest Service
- Washington Department of Agriculture
- Berry Botanic Garden
- The Nature Conservancy
- Izaak Walton League of America

Current Statewide or Multi-District Efforts
- Threatened/Endangered/Sensitive Species
- Challenge Cost Share Program
- Riparian Area Enhancement Program
- Spotted Owl Management
- Fish, Wildlife, and Botanical Data Bases
- Areas of Critical Environmental Concern
- Research Natural Areas
- Biological Diversity
- Viable Populations of Species
- Anadromous Fisheries
- Quality Management Area Program
- Recreational Fishing Enhancement Program
- Watchable Wildlife

Western Oregon–Scott Powers

Oregon/Washington Bureau of Land Management


BRITISH COLUMBIA, CANADA
KILOMETRES
0 10 25 50
0 10 25 50
MILES
N
IDAHO
CALIFORNIA
NEVADA
SPOKANE DISTRICT
SALEM DISTRICT
EUGENE DISTRICT
COOS BAY DISTRICT
ROSEBURG DISTRICT
MEDFORD DISTRICT
LAKEVIEW DISTRICT
PRINEVILLE DISTRICT
BURNS DISTRICT
VALE DISTRICT
BELLINGHAM
SEATTLE
OLYMPIA
SPOKANE
WENATCHEE
YAKIMA
ASTORIA
VANCOUVER
HOOD RIVER
THE DALLES
PORTLAND
TILLAMOOK
McMINNVILLE
SALEM
NEWPORT
ALBANY
CORVALLIS
FLORENCE
EUGENE
REEDSPORT
NORTH BEND
COOS BAY
BANDON
ROSEBURG
PORT ORFORD
GOLD BEACH
GRANTS PASS
MEDFORD
BROOKINGS
KLAMATH FALLS
LAKEVIEW
MADRAS
PRINEVILLE
BEND
BURNS
HINES
VALE
SKAGIT
RIVER
COLUMBIA
YAKIMA
CHEHALIS
COWLITZ
NEHALEM
JOHN DAY
CLACKAMAS
MOLLALA
NORTH SANTIAM
SOUTH SANTIAM
MIDDLE SANTIAM
NESTUCCA
SILETZ
ALSEA
N. FORK
SOUTH FORK
FERN RIDGE LAKE
SIUSLAW
McKENZIE
WILLAMETTE
UMPQUA
NORTH FORK
SOUTH FORK
COQUILLE
ROGUE
ILLINOIS
CRATER LAKE
UPPER KLAMATH LAKE
KLAMATH RIVER
SPRAGUE RIVER
GERBER RESERVOIR
GOOSE LAKE
SUMMER LAKE
LAKE ABERT
LAKE SIMTUSTUS
LAKE BILLY CHINOOK
DESCHUTES
CROOKED
SOUTH FORK
NORTH FORK
MIDDLE FORK
SILVIES
SILVER CREEK
HARNEY LAKE
MALHEUR LAKE
MALHEUR RIVER
OWYHEE
GRANDE RONDE
POWDER RIVER
SNAKE RIVER
5
90
82
84
97
2
395
101
26
30
20
126
199
62
140
31
78
205
95
42
93

Burns District

HC 74, 12533 Highway 20 West
Hines, OR 97738
(503) 573-5241

Offices - District Office and two Resource Areas (Andrews and Three Rivers)

Size - approximately 3.4 million acres

Number of Habitat/Species Management Plans
- Implemented - 6
- Proposed - 8

Number of Fish/Wildlife/Botanical Related ACECs - 17

Current Fish/Wildlife/Botanical Program Staffing
- District Program Leader (Fishery Biologist)
- Wildlife Biologists (2)
- Botanist/Ecologist
- Natural Resource Specialists, 2 at 1/2 time (1)

District Program Priorities
- Bald Eagle Roost Areas
- Blitzen River Wild and Scenic River
- California Bighorn Sheep Management
- Pickett Rim Raptor Nesting
- Rocky Mountain Elk Management
- Sage Grouse Research
- Special Status Species Habitat Inventory
- Steens Mountains
- Wetland and Riparian Management Areas
- South Narrows ACEC
- Alvord Desert ACEC
- Pueblo Foothills Special Status Plants

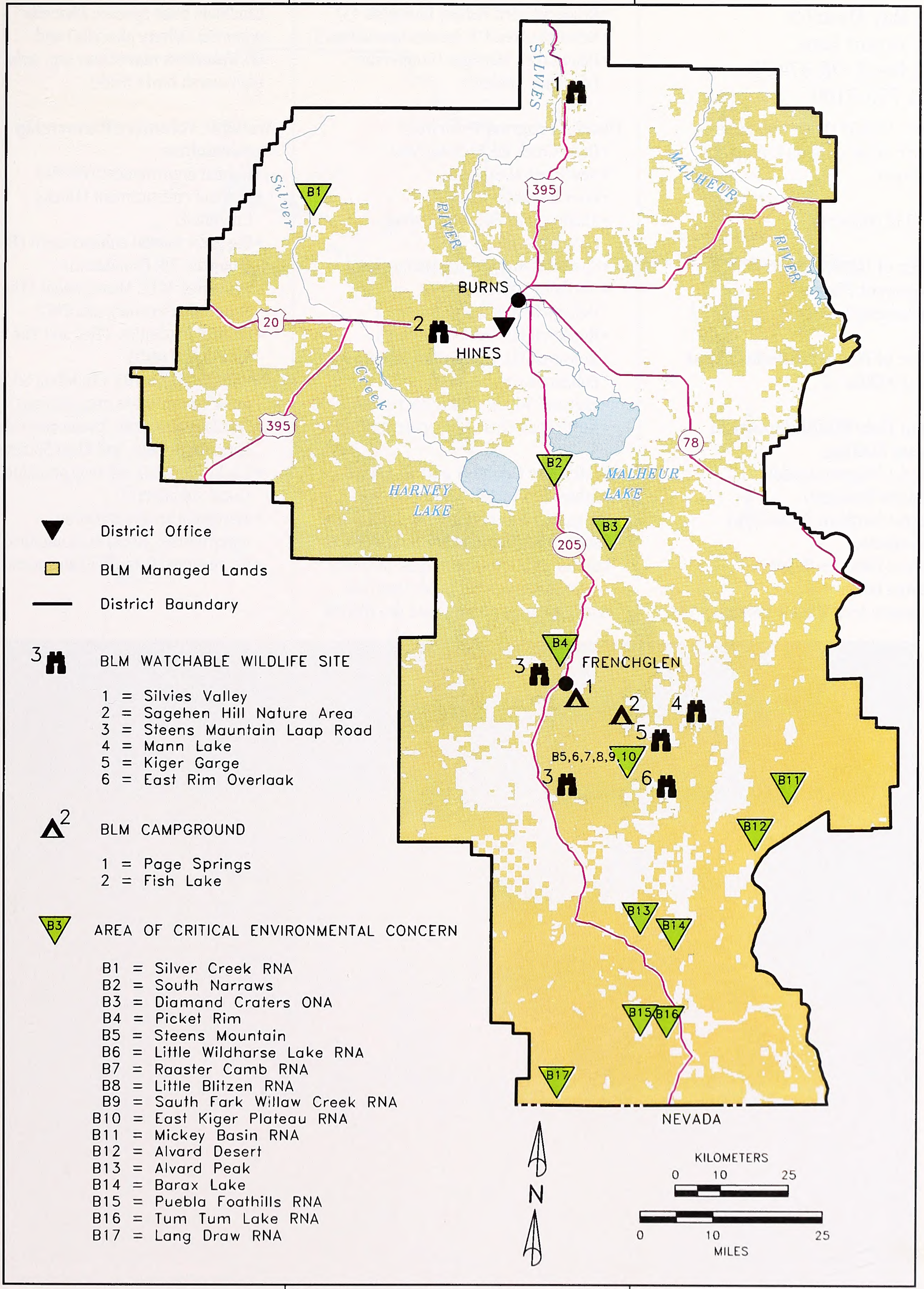
Species (or Groups) and Habitats Emphasized in FW 2000

Waterfowl; special status plant, animal and fish inventory and monitoring (i.e. bald eagle, golden eagle, Swainson's hawk, long-billed curlew, sage grouse, Willow/Whitehorse cutthroat trout, Malheur sculpias, Borax Lake chub, redband trout, Catlow tui chub); big game habitat (i.e. Rocky Mountain elk, mule deer, pronghorn antelope); bighorn sheep inventory; *Stephanomeria malheurensis* (Malheur wirelettuce); *Trifolium leibergii* (Leiberg's clover); salt-desert shrub/grassland habitat, subalpine habitat, sage grouse research (habitat needs).

Available Volunteer/Partnership Opportunities
- ACEC monitoring
- Bald eagle monitoring
- Riparian enhancement
- Special status plant inventory
- Raptor habitat inventory
- Warm water fish habitat enhancement
- Special status fish habitat inventory
- Big game habitat improvement
- Wetland habitat improvement
- Recreational fishing enhancement
- Stream/riparian/wetland monitoring

Steens Mountain–Burns District

Burns District


SILVIES
1
395
MALHEUR
RIVER
Silver
B1
RIVER
BURNS
20
2
HINES
Creek
395
78
B2
MALHEUR
LAKE
HARNEY
LAKE
B3
205
District Office
BLM Managed Lands
District Baundary
3
BLM WATCHABLE WILDLIFE SITE
1 = Silvies Valley
2 = Sagehen Hill Nature Area
3 = Steens Mountain Laap Road
4 = Mann Lake
5 = Kiger Garge
6 = East Rim Overlaak
B4
FRENCHGLEN
3
1
2
4
5
B5,6,7,8,9,10
3
6
B11
B12
2
BLM CAMPGROUND
1 = Page Springs
2 = Fish Lake
B3
AREA OF CRITICAL ENVIRONMENTAL CONCERN
B1 = Silver Creek RNA
B2 = South Narraws
B3 = Diamond Craters ONA
B4 = Picket Rim
B5 = Steens Mountain
B6 = Little Wildharse Lake RNA
B7 = Raaster Camb RNA
B8 = Little Blitzen RNA
B9 = Sauth Fark Willaw Creek RNA
B10 = East Kiger Plateau RNA
B11 = Mickey Basin RNA
B12 = Alvard Desert
B13 = Alvard Peak
B14 = Barax Lake
B15 = Puebla Foathills RNA
B16 = Tum Tum Lake RNA
B17 = Lang Draw RNA
B13
B14
B15
B16
B17
NEVADA
N
KILOMETERS
0
10
25
0
10
25
MILES

Coos Bay District

1300 Airport Lane
North Bend, OR 97459
(503) 756-0100

Offices - District Office with three Resource Areas (Umpqua, Tioga and Myrtlewood)

Size - 332,000 acres

Number of Habitat/Species Management Plans

- Implemented - 6
- Proposed - 22

Number of Fish/Wildlife/Botanical Related ACECs - 2

Current Fish/Wildlife/Botanical Program Staffing

- District Program Leader (Wildlife Biologist)
- District Northern Spotted Owl Coordinator
- District Fisheries Biologist
- District Botanist
- Resource Area Wildlife Biologists (3)
- Resource Area Fishery Biologists (3)
- Resource Area T/E Species Specialists(3)
- Dean Creek Manager (Cooperative Education Student)

District Program Priorities

- Dean Creek Elk Viewing Area
- New River ACEC
- Coos Bay Shorelands
- Anadromous Fisheries Habitat Enhancement
- Special Status Species Management
- Northern Spotted Owl Density/Demographic Study
- Roosevelt Elk Habitat Research
- Roosevelt Elk (Big Game) Habitat Enhancement
- Fish and Wildlife 2000/Recreation 2000
- North Fork Chetco Riparian Area ACEC

Species (or Groups) and Habitats Emphasized in FW 2000

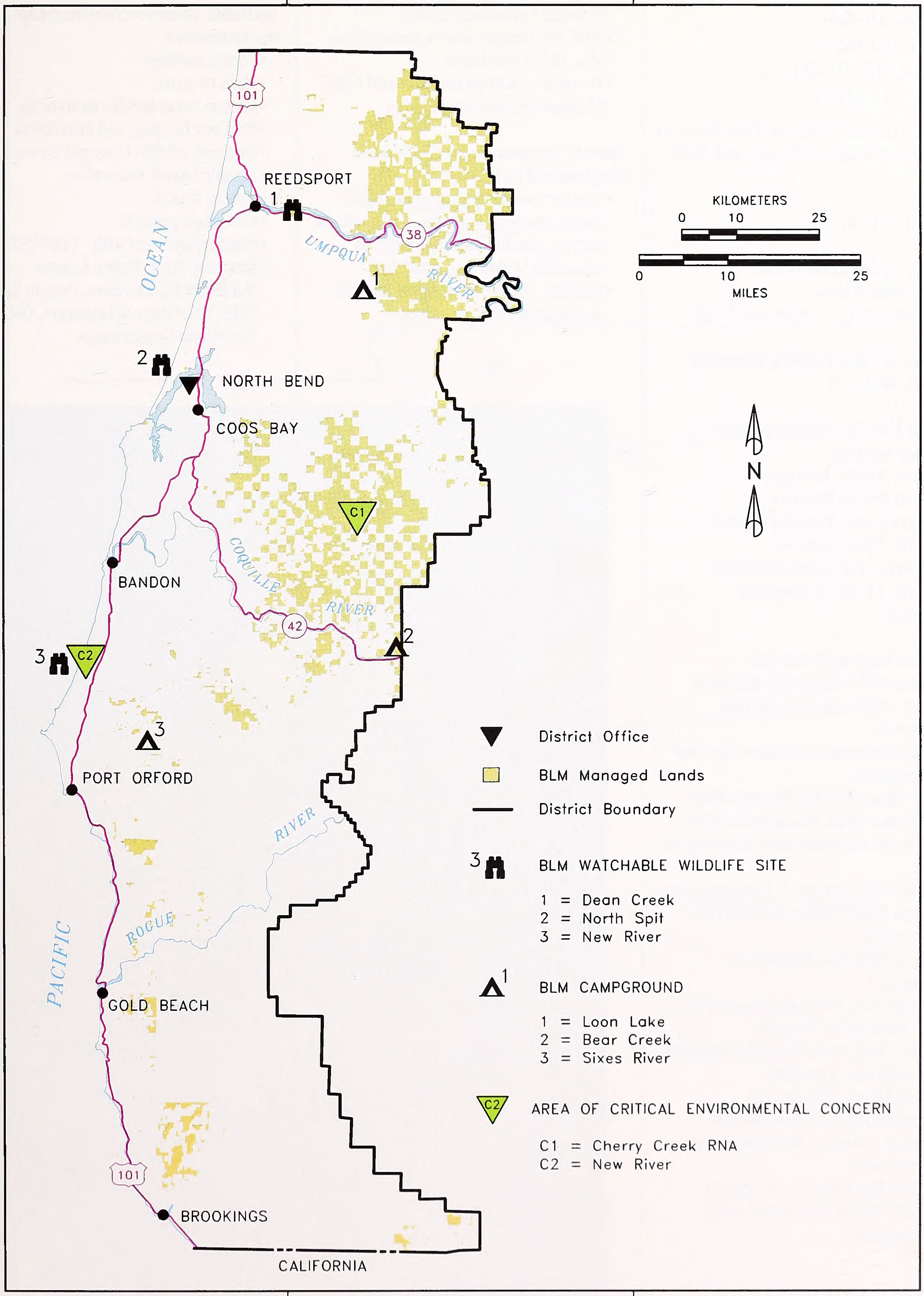
Big game (Roosevelt elk), anadromous fisheries (chinook, coho, and steelhead salmon), waterfowl/wetlands, northern spotted owl, Aleutian goose, marbled murrelet, snowy plover, and two federal candidate plant species: *Phacelia argentea* (silvery phacelia) and *Cordylanthus maritimus* ssp. *palustris* (salt marsh bird's beak).

Available Volunteer/Partnership Opportunities

- Habitat improvement (ODFW)
- Wetland enhancement (Ducks Unlimited)
- Big game habitat enhancement (Rocky Mountain Elk Foundation)
- New River ACEC Management (The Nature Conservancy, aka TNC)
- Habitat acquisition (TNC and The Trust for Public Lands)
- Wildlife inventories (Audubon Society, other conservation organizations)
- Special status plant inventories (state Agriculture Dept. and Plant Societies)
- Rocky Mountain elk interpretation (local volunteers)
- Marketing areas recreation opportunities (local communities)
- Recreational fishing enhancement

Roosevelt Elk–Coos Bay District

Coos Bay District


101
REEDSPORT
1
38
UMPQUA RIVER
1
OCEAN
2
NORTH BEND
COOS BAY
C1
COQUILLE RIVER
BANDON
42
2
3
C2
3
PORT ORFORD
RIVER
ROGUE
PACIFIC
GOLD BEACH
101
BROOKINGS
CALIFORNIA
KILOMETERS
0
10
25
0
10
25
MILES
N
▼ District Office
▨ BLM Managed Lands
District Boundary
3 BLM WATCHABLE WILDLIFE SITE
1 = Dean Creek
2 = North Spit
3 = New River
1 BLM CAMPGROUND
1 = Loon Lake
2 = Bear Creek
3 = Sixes River
C2 AREA OF CRITICAL ENVIRONMENTAL CONCERN
C1 = Cherry Creek RNA
C2 = New River

Eugene District

2890 Chad Drive
Eugene, OR 97401
(503) 683-6600

Offices - District Office and three Resource Areas (Coast Range, McKenzie, and South Valley)

Size - 317,000 acres

Number of Habitat/Species Management Plans

- Implemented - 3
- Proposed - 35

Number of Fish/Wildlife/Botanical Related ACECs - 7

Current Fish/Wildlife/Botanical Program Staffing

- District Wildlife Biologist
- District Fishery Biologist
- Resource Area Wildlife Biologists (3 FTE, 2 Temporaries)
- Resource Area Fishery Biologists (1 FTE, 1 Temp, 2 Coop Ed.)
- Botanist

District Program Priorities

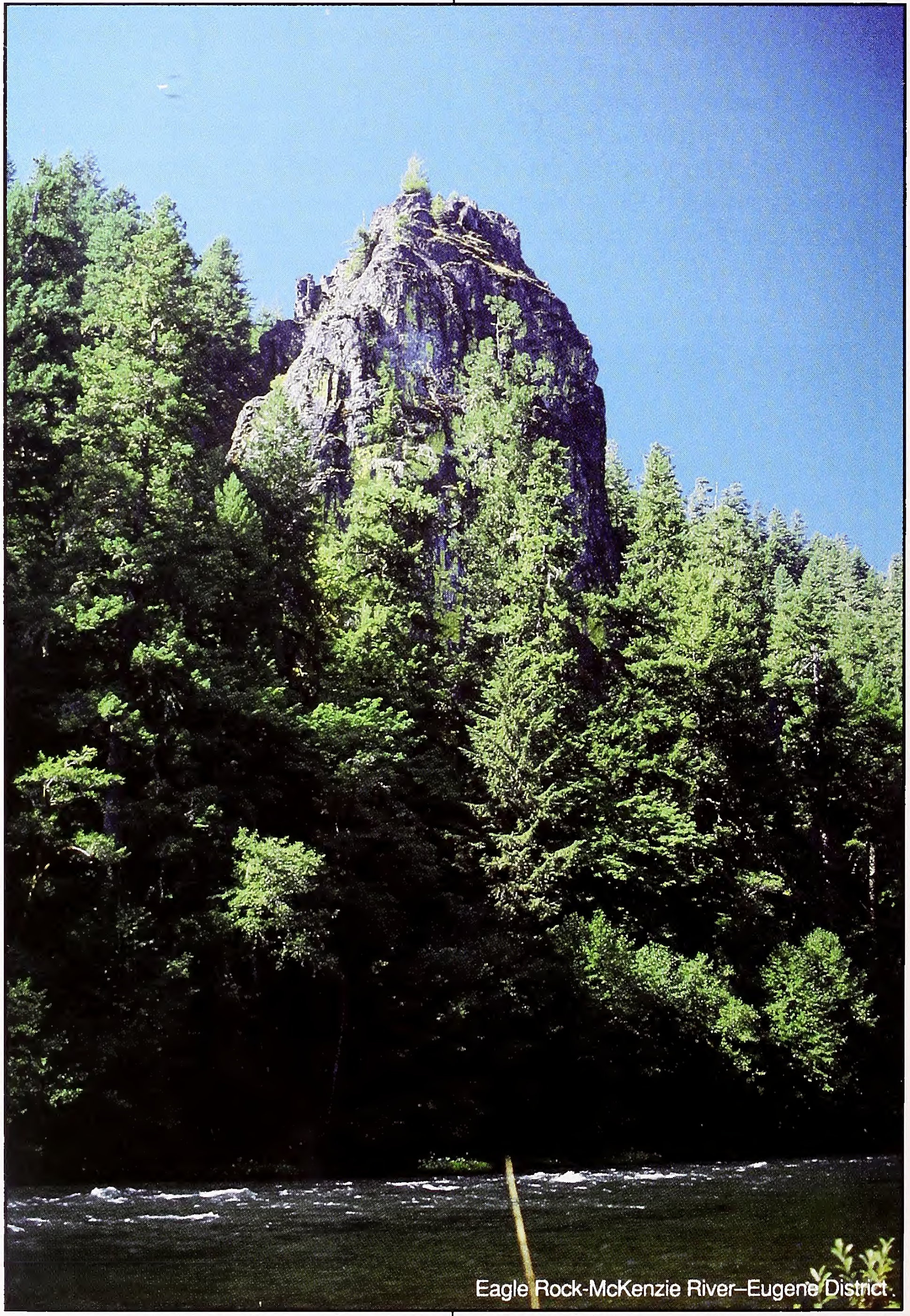
- Spotted Owl Demography Research
- NCASI Cooperative Spotted Owl Research
- Cougar Mountain and Other Yew Area Management
- Bald Eagle ACEC Management Plans
- Key Raptor ACEC Management Plans
- ODFW Elk Emphasis Area Management Plan
- Biodiversity Planning & Implementation
- Special Status Species Inventory and Monitoring
- Coburg Hills Bald Eagle Roost Acquisition
- Triangle Lake Wetlands Acquisitions
- Hult Reservoir & Wetlands
- Mosby Creek Pond Wetland Acquisitions
- Esmond Lake Acquisition
- Heceta Dunes Management
- Peregrine Falcon Reintroduction
- Riparian Inventory, Restoration and Management
- Siuslaw River Riparian Acquisition
- Aquatic Habitat Restoration and Management
- Riparian Community Studies
- HMP Preparation and Implementation after RMP Completion
- Designated & Proposed RNA and ACEC Management and Acquisitions

Species (or Groups) and Habitats Emphasized in FW 2000

- Species: northern spotted owl, bald eagles, marbled murrelet, Roosevelt elk, ospreys, anadromous and resident salmonids, native non-game fish.
- Habitats: All five seral stages; aquatic and riparian; unique habitats.

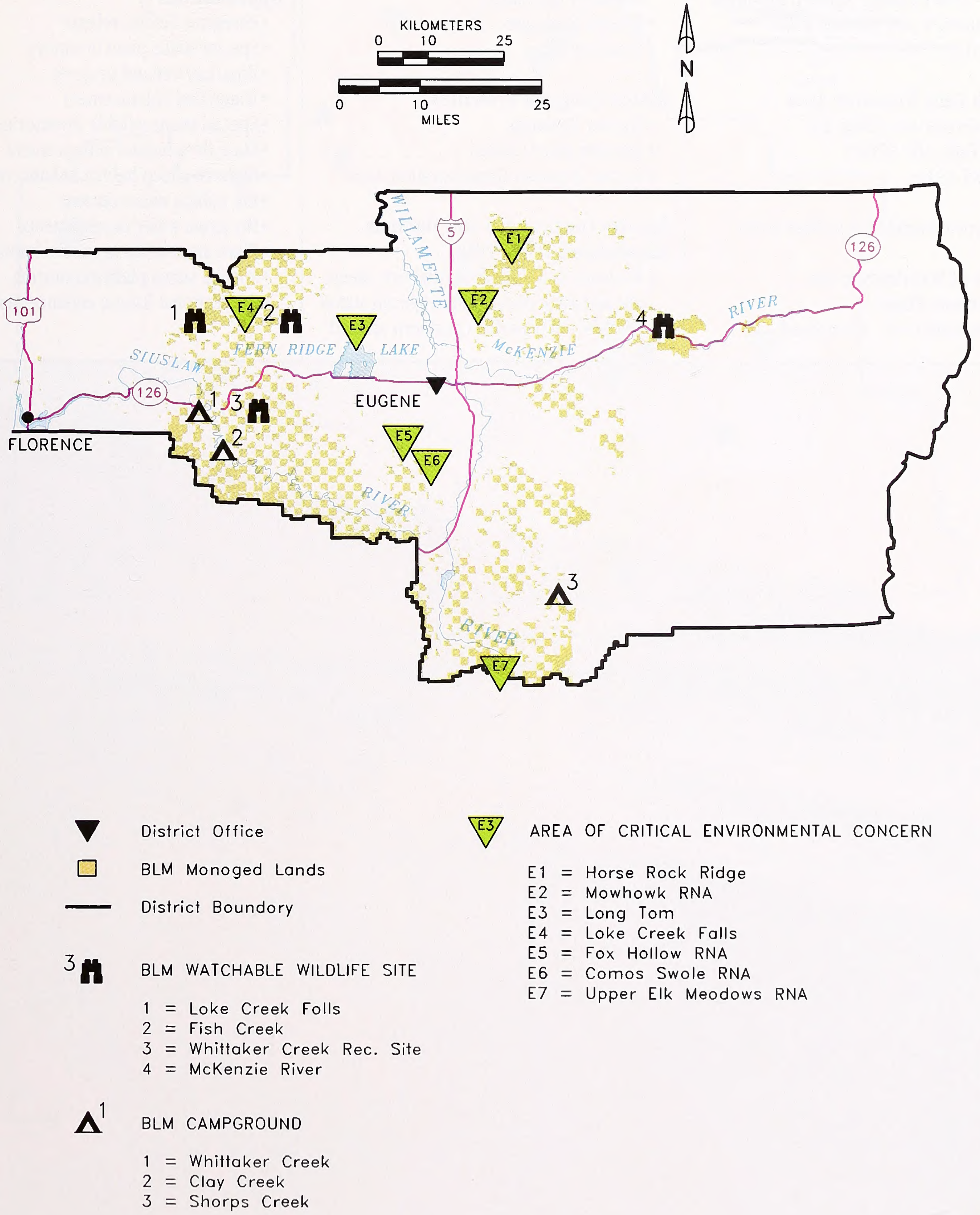
Available Volunteer/Partnership Opportunities

- Forage seedings
- Road closures
- Special status species monitoring
- Bird box building and installation
- Counting wildlife trees and downed logs
- Aquatic habitat restoration
- Fishing access
- Cost share projects
- Partnerships exist with: ODFW/STEP program, Izaac Walton League, Northwest Steelheaders, Oregon Trout, USFS, U.S. Corps of Engineers, OSU, and The Nature Conservancy



Eagle Rock-McKenzie River–Eugene District.

Eugene District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MILES
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WILLAMETTE
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E2
E3
E4
E5
E6
E7
1
2
3
4
101
FERN RIDGE LAKE
McKENZIE
RIVER
SIUSLAW
126
EUGENE
FLORENCE
RIVER
RIVER
District Office
BLM Managed Lands
District Boundary
BLM WATCHABLE WILDLIFE SITE
1 = Lake Creek Falls
2 = Fish Creek
3 = Whittaker Creek Rec. Site
4 = McKenzie River
BLM CAMPGROUND
1 = Whittaker Creek
2 = Clay Creek
3 = Sharps Creek
AREA OF CRITICAL ENVIRONMENTAL CONCERN
E1 = Horse Rock Ridge
E2 = Mowhawk RNA
E3 = Long Tom
E4 = Lake Creek Falls
E5 = Fox Hollow RNA
E6 = Camas Swale RNA
E7 = Upper Elk Meadows RNA

Lakeview District

Lakeview District
1000 Ninth Street S.
P.O. Box 151
Lakeview, OR 97630
(503) 947-2177

Offices - District Office and two Resource Areas: Lakeview and Klamath Falls (detached)

Klamath Falls Resource Area
2795 Anderson Ave., Bldg. 25
Klamath Falls, OR 97603
(503) 883-6916

Size - approximately 3.4 million acres

Number of Habitat/Species Management Plans
- Implemented - 9
- Proposed - 17

Number of Fish/Wildlife/Botanical Related ACECs - 4

Current Fish/Wildlife/Botanical Program Staffing
- District Program Leader (Natural Resource Specialist)
- Wildlife Biologists (3)
- Botanists (2)

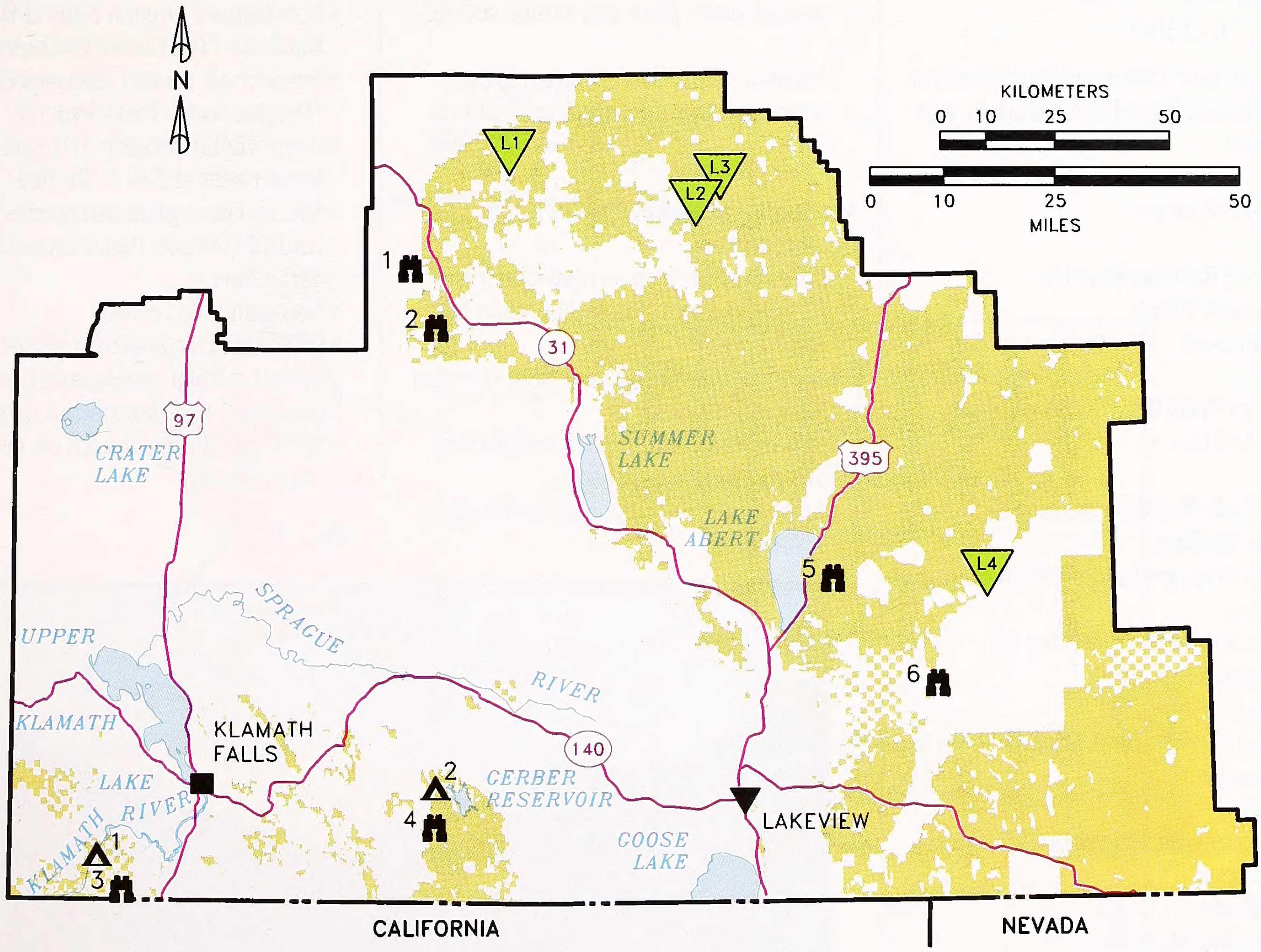
Distrct Program Priorities
- Warner Wetlands
- Klamath River Canyon
- Gerber Riparian Demonstration Area

Species (or Groups) and Habitats Emphasized in FW 2000
- Wetlands and waterfowl, bighorn sheep, elk and mule deer habitat, special status wildlife and fisheries (northern spotted owl, bald eagle, peregrine falcon, Warner sucker, Foskett Spring speckled dace, Lost River sucker, and short nose sucker), and special status plants.

Available Volunteer/Partnership Opportunities
- Peregrine Falcon release
- Special status plant inventory
- Riparian/wetland projects
- Watershed enhancement
- Special status wildlife inventories
- Mule deer habitat enhancement
- Bighorn sheep habitat enhancement
- Elk habitat enhancement
- Big game water developments
- Plant inventories in special habitats
- Special status plant monitoring
- Recreational fishing enhancement

Warner Wetlands–Lakeview District

Lakeview District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97
CRATER LAKE
SUMMER LAKE
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LAKE ABERT
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SPRAGUE
UPPER
KLAMATH
LAKE
RIVER
6
KLAMATH FALLS
140
2
GERBER RESERVOIR
4
KLAMATH RIVER
1
3
GOOSE LAKE
LAKEVIEW
CALIFORNIA
NEVADA

▼ District Office

■ Resource Area Office

🟨 BLM Managed Lands

— District Boundary

3 BLM WATCHABLE WILDLIFE SITE

1 = Silver Lake to Horse Ranch
2 = Buck Creek
3 = Klamath River Canyon
4 = Gerber Block
5 = Abert Rim
6 = Warner Wetlands/Potholes

▼ L3 AREA OF CRITICAL ENVIRONMENTAL CONCERN

L1 = Devil's Garden Lava Beds
L2 = Lost Forest–Sand Dunes–Fossil Lake
L3 = Lost Forest RNA
L4 = Warner Wetlands

▲ 2 BLM CAMPGROUND

1 = Topsy
2 = Gerber Reservoir

Medford District

3040 Biddle Road
Medford, OR 97504
(503) 770-2200

Offices - District Office and four Resource Areas (Ashland, Butte Falls, Glendale, and Grants Pass)

Size - 861,000 acres

Number of Habitat/Species Management Plans

- Implemented - 15 •Proposed - 60

Number of Fish/Wildlife/Botanical Related ACECs - 5

Current Fish/Wildlife/Botanical Program Staffing

- District Program Leader (Wildlife Biologist)
- Wildlife Biologists (5) (plus 14 additional temporary)
- Fishery Biologists (2)
- Botanist (1 FTE plus 1 additional temporary)

District Program Priorities

- Jenny Creek
- Table Rocks
- Eight Dollar Mountain
- Pleasant Creek
- Kelsy Creek/Rogue River Old Growth Habitat Area
- Bobby Creek Old Growth Habitat Area
- Mule Creek Elk Habitat Area
- Elk Valley Creek Elk Habitat Area
- Rogue Wild and Scenic River
- Woodcock Bog RNA (Siskiyou Endemics)
- Round Top RNA (native grassland)
- Holton Creek RNA
- Oregon Gulch RNA
- Lost Lake RNA
- Gray Book Glades RNA
- North Fork Silver Creek RNA
- Flounce Rock RNA
- King Mountain Rock Garden ACEC
- Pilot Rock ACEC (volcanic plug)
- Plant Fossils (botanical arch)

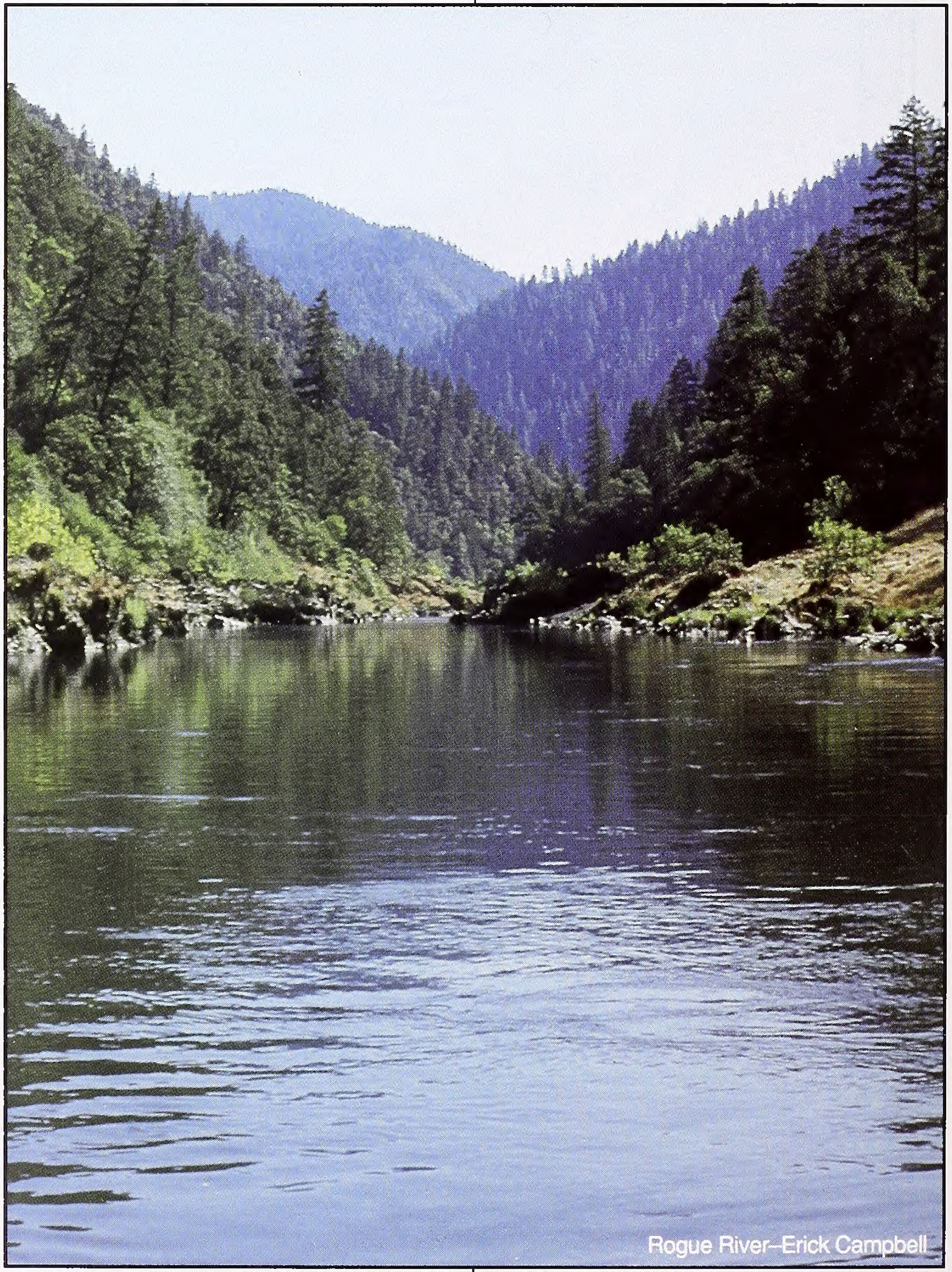
Species (or Groups) and Habitats Emphasized in FW 2000

Species: Elk, black-tailed deer; upland/small game; northern spotted owl; peregrine and bald eagle; cavity dwellers; osprey, great blue heron, non-game birds; amphibians; coho salmon, summer steelhead, and resident trout; special status plant and animal species.

Habitat: Elk habitat, riparian areas, wetlands, special habitats and natural areas.

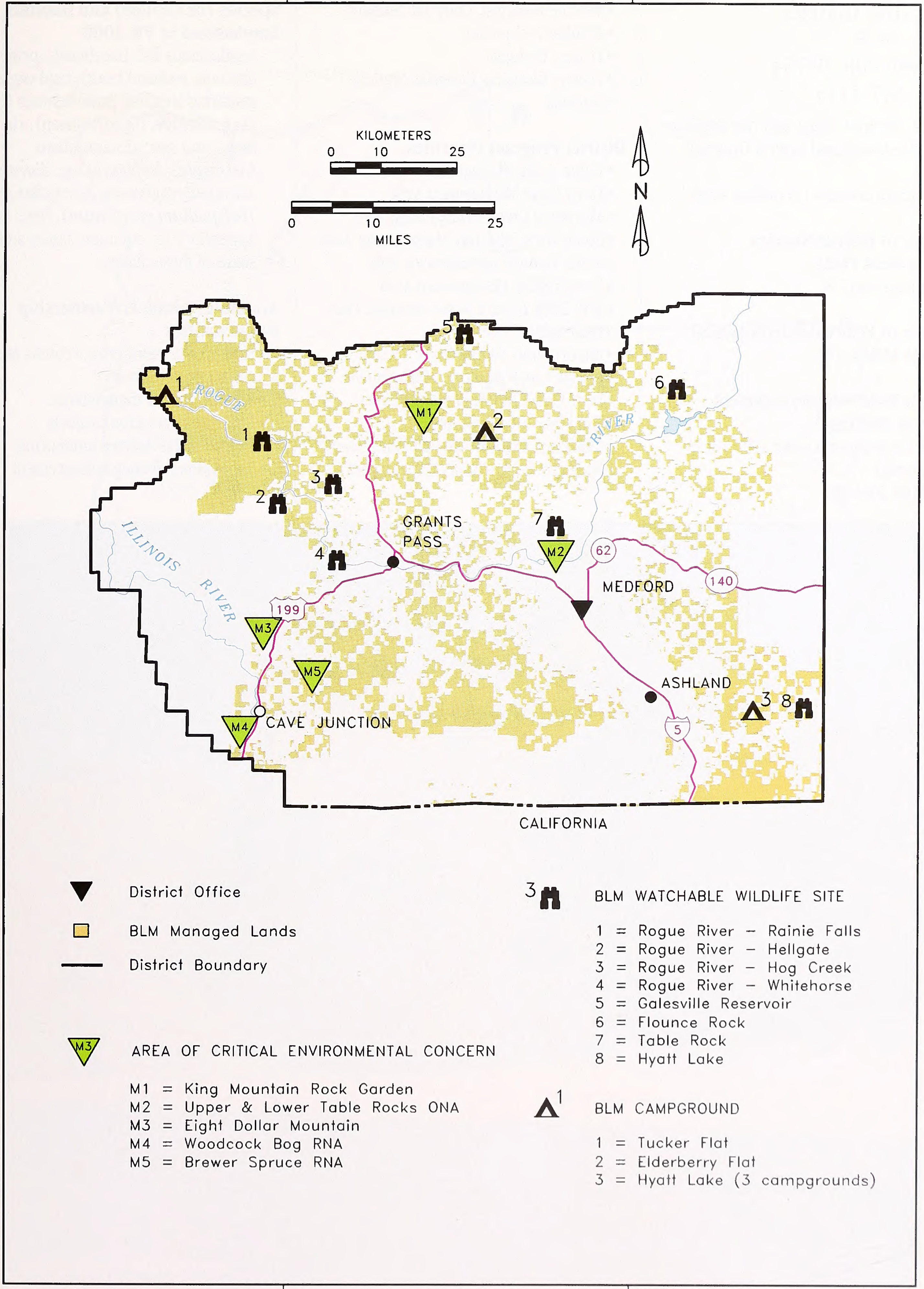
Available Volunteer/Partnership Opportunities

- Cost share projects—road closures, forage seedings (Rocky Mountain Elk Foundation)
- Big game habitat improvement (Oregon Hunters Association)
- Fish habitat enhancement and fishing access (Rogue Flyfishers)
- Anadromous fish habitat (Steelheaders Association)
- Bird inventory and surveying; bird box building and installation (Rogue Valley Audubon Society)
- Acquisitions; Oregon Natural Heritage Database (The Nature Conservancy)
- Inventories; special status species (Oregon Native Plant Society)
- Coop wildlife projects (Oregon Department of Fish & Wildlife)
- Special status plant inventories; weed control (Oregon Department of Agriculture)
- Non-game bird census
- Challenge Cost Share for plants (fencing habitat, habitat management, educational programs, and interpretive nature hikes)
- Electrophoretic research on taxon status - fish



Rogue River–Erick Campbell

Medford District


KILOMETERS
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MILES
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ROGUE
RIVER
ILLINOIS
RIVER
GRANTS PASS
MEDFORD
ASHLAND
CAVE JUNCTION
CALIFORNIA
199
62
140
5
M1
M2
M3
M4
M5
1
2
3
4
5
6
7
8
1
2
3
District Office
BLM Managed Lands
District Boundary
AREA OF CRITICAL ENVIRONMENTAL CONCERN
M1 = King Mountain Rock Garden
M2 = Upper & Lower Table Rocks ONA
M3 = Eight Dollar Mountain
M4 = Woodcock Bog RNA
M5 = Brewer Spruce RNA
BLM WATCHABLE WILDLIFE SITE
1 = Rogue River – Rainie Falls
2 = Rogue River – Hellgate
3 = Rogue River – Hog Creek
4 = Rogue River – Whitehorse
5 = Galesville Reservoir
6 = Flounce Rock
7 = Table Rock
8 = Hyatt Lake
BLM CAMPGROUND
1 = Tucker Flat
2 = Elderberry Flat
3 = Hyatt Lake (3 campgrounds)

Prineville District

185 E. 4th St.
Prineville, OR 97754
(503) 447-4115

Offices - District Office with two Resource Areas (Deschutes and Central Oregon)

Size - approximately 1.6 million acres

Number of Habitat/Species Management Plans
- Implemented - 8

Number of Fish/Wildlife/Botanical Related ACECs - 12

Current Fish/Wildlife/Botanical Program Staffing
- District Program Leader (Wildlife Biologist)
- Wildlife Biologist
- Wildlife Biologist, Coop Ed. Student
- Wildlife Technician
- Fishery Biologist
- Fishery Biologist, Coop Ed. Student
- Botanist

District Program Priorities
- Gable Creek Management Area
- Horn Butte Management Area
- Murderer Creek Management Area
- South Fork John Day Management Area
- South Ochoco Management Area
- Powell Butte Management Area
- F/W 2000 Upland Game Strategic Plan
- Bald Eagle Winter Area
- Anadromous Salmonids
- Bridge Creek Riparian Management
- Bear Creek Riparian Management
- John Day Waterfowl Area
- California Bighorn Sheep Management
- Sage grouse Research/Management

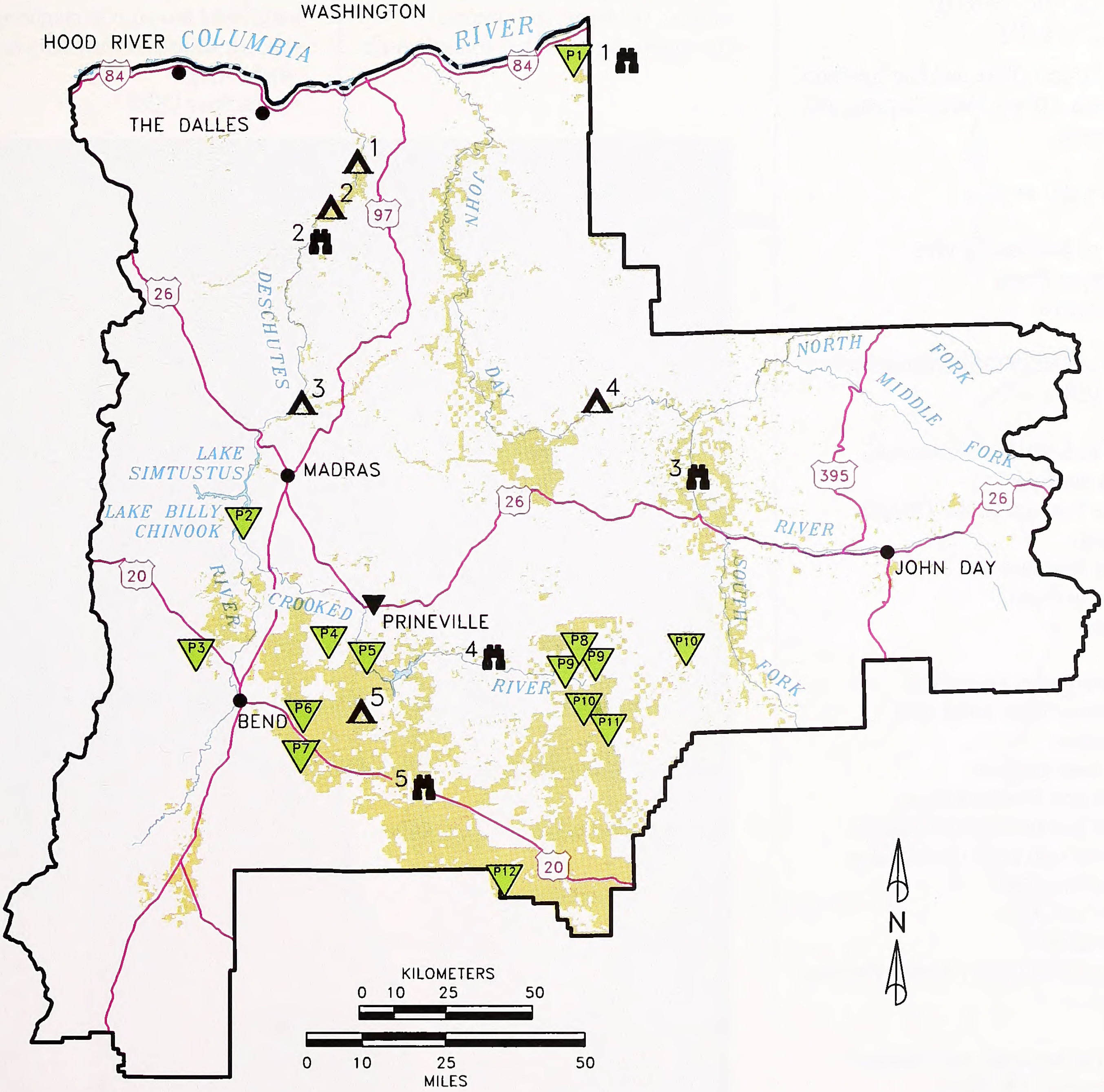
Species (or Groups) and Habitats Emphasized in FW 2000

Anadromous fish (steelhead, spring chinook, redband trout), bald eagle wintering area, big game habitats (elk, deer, antelope, bighorn sheep), riparian areas, and special status plants (*Astragalus diaphanus* var. *diurnis*, *Astragalus tyghensis*, *Astragalus peckii*, *Thelypodium eucosmum*). Note: See Appendix E for common names and status of these plants.

Available Volunteer/Partnership Opportunities
- Sage grouse monitoring (counts and radio telemetry study)
- Wildlife guzzler maintenance
- Riparian restoration projects
- Special status species monitoring
- Recreational fishing enhancement

John Day River–Prineville District

Prineville District


WASHINGTON
HOOD RIVER
COLUMBIA
RIVER
84
84
THE DALLES
P1
1
1
2
97
2
JOHN
DAY
DESCHUTES
26
3
4
NORTH
FORK
MIDDLE
FORK
395
26
RIVER
3
LAKE SIMTUSTUS
MADRAS
26
LAKE BILLY CHINOOK
P2
JOHN DAY
20
RIVER
CROOKED
PRINEVILLE
SOUTH
FORK
P3
P4
P5
4
P8
P9
P9
P10
P10
RIVER
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BEND
P6
P7
P11
5
20
P12
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KILOMETERS
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MILES

▼ District Office

🟨 BLM Managed Lands

— District Boundary

P3 AREA OF CRITICAL ENVIRONMENTAL CONCERN

P1 = Horn Butte
P2 = The Island RNA
P3 = Peck's Milkvetch
P4 = Powell Butte RNA
P5 = Lower Crooked River
P6 = Badlands
P7 = Horse Ridge RNA (several sites)
P8 = Forest Creeks
P9 = North Fork Crooked River
P10 = Winter Roost
P11 = South Fork Crooked River
P12 = Benjamin RNA (several sites)

3 BLM WATCHABLE WILDLIFE SITE

1 = Horned Butte
2 = Sherar's Falls
3 = Murderer's Creek
4 = Crooked River
5 = Audubon Site

△2 BLM CAMPGROUND

1 = Macks Canyon
2 = Beavertail
3 = Trout Creek
4 = Muleshoe
5 = Chimney Rock

Roseburg District
777 Garden Valley Blvd.
Roseburg, OR 97470
(503) 672-4491

Offices - District Office and four Resource Areas (Drain, Dillard, North Umpqua, and South Umpqua)

Size - 424,000 acres

Number of Habitat/Species Management Plans
- Implemented - 1

Number of Fish/Wildlife/Botanical Related ACECs - 7

Current Fish/Wildlife/Botanical Program Staffing
- District Program Leader (Wildlife Biologist)
- Wildlife Biologists (6)
- Fishery Biologist
- Botanist

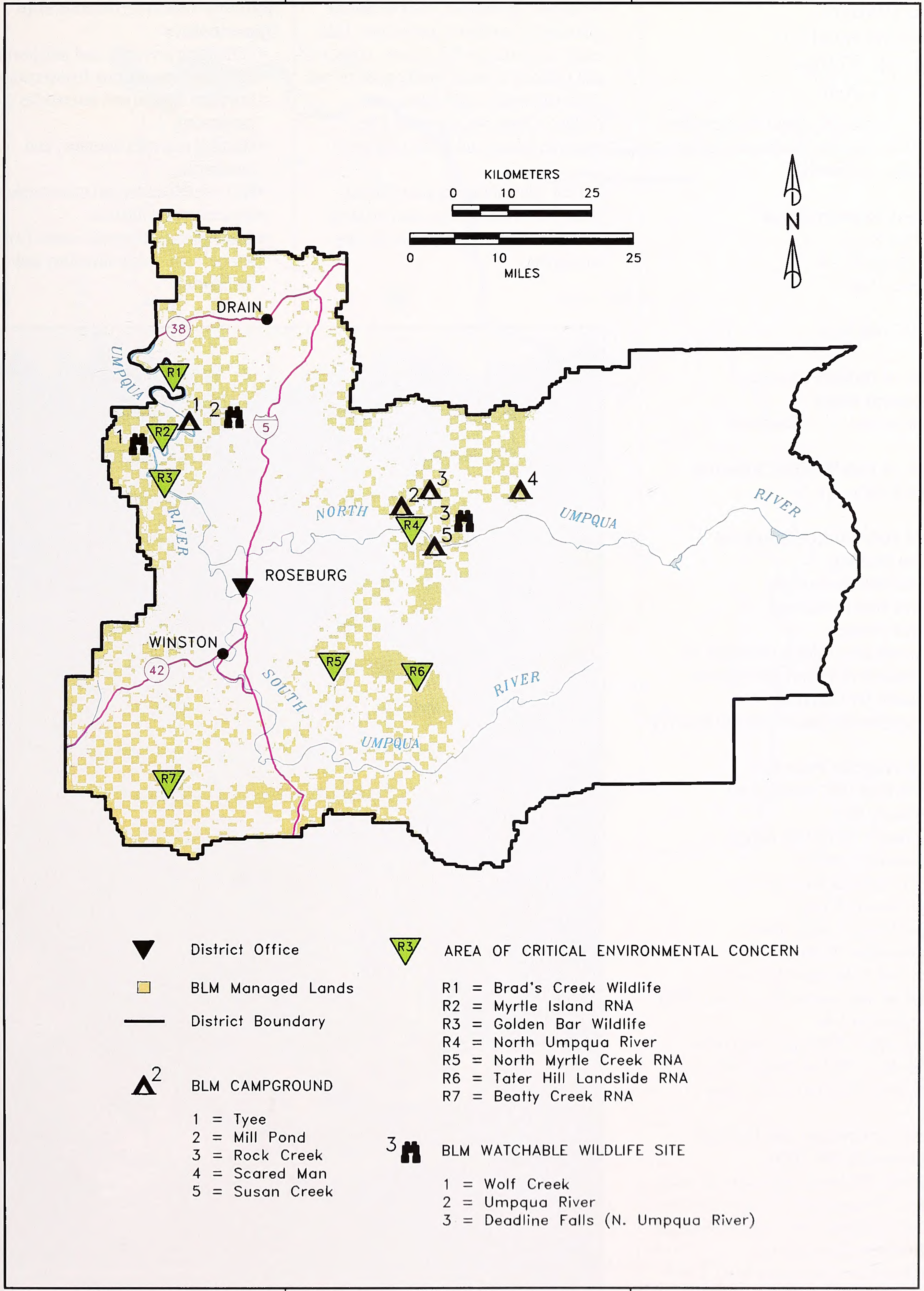
District Program Priorities
- Columbian White-Tailed Deer Restoration
- Wolf Creek Riparian
- Spotted Owl Density Studies
- Spotted Owl Demographic Studies
- Statewide Bald Eagle Coordination
- Myrtle Island RNA
- Beatty Creek RNA
- Red Pond EEA
- Umpqua River Osprey Nesting Platforms Project

Species (or Groups) and Habitats Emphasized in FW 2000
- Anadromous fish (coho salmon, steelhead, cutthroat trout)
- Elk habitat
- Columbian white-tailed deer
- Northern spotted owl, bald eagle, osprey
- Special Status plants: *Calochortus umpquaensis, C. coxii, Allium bolanderi, Bensoniella oregana, Plagiobothrys hirtus, Arabis koehleri* var. *koehleri, Polystichum californicum, Mimulus kelloggii*, and *Limnanthes gracilis* var. *gracilis*. (Note: See Appendix E for common names and status of these plants.)
- Amphibians (frogs: red-legged frog, Cascade frog, tailed frog, foothills yellow-legged frog, bullfrog; and salamanders: Pacific giant, northwestern, clouded, Oregon slender, California slender, Del Norte, and Olympic)
- Townsends big eared bat, fringed myotis

Available Volunteer/Partnership Opportunities
- Wolf Creek riparian
- ACEC/RNA inventory & monitoring
- Special status plant inventory & monitoring
- Smith River CRMP

Spotted Owl–Marty Cordano

Roseburg District


KILOMETERS
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MILES
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UMPQUA
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R3
RIVER
NORTH
UMPQUA
RIVER
3
2
3
4
R4
5
ROSEBURG
WINSTON
42
SOUTH
R5
R6
RIVER
UMPQUA
R7
District Office
BLM Managed Lands
District Boundary
BLM CAMPGROUND
1 = Tyee
2 = Mill Pond
3 = Rock Creek
4 = Scared Man
5 = Susan Creek
AREA OF CRITICAL ENVIRONMENTAL CONCERN
R1 = Brad's Creek Wildlife
R2 = Myrtle Island RNA
R3 = Golden Bar Wildlife
R4 = North Umpqua River
R5 = North Myrtle Creek RNA
R6 = Tater Hill Landslide RNA
R7 = Beatty Creek RNA
BLM WATCHABLE WILDLIFE SITE
1 = Wolf Creek
2 = Umpqua River
3 = Deadline Falls (N. Umpqua River)

Salem District

1717 Fabry Road S.E.
Salem, OR 97306
(503) 375-5646

Offices - District Office and five Resource Areas: Alsea, Yamhill, Clackamas, Santiam, and Tillamook (detached)

Tillamook Resource Area
4610 Third St.
Tillamook OR 97141
(503) 842-7546

Size - 397,000 acres

Number of Habitat/Species Management Plans
- Implemented - 1
- Proposed - 3

Number of Fish/Wildlife/Botanical Related ACECs - 21

Current Fish/Wildlife/Botanical Program Staffing
- District Wildlife Biologist
- District Fishery Biologist
- District Botanist
- Resource Area Wildlife Biologists (4)
- Resource Area Fishery Biologists (2)
- Resource Area Botanist
- Cooperative Education Student (Fishery)

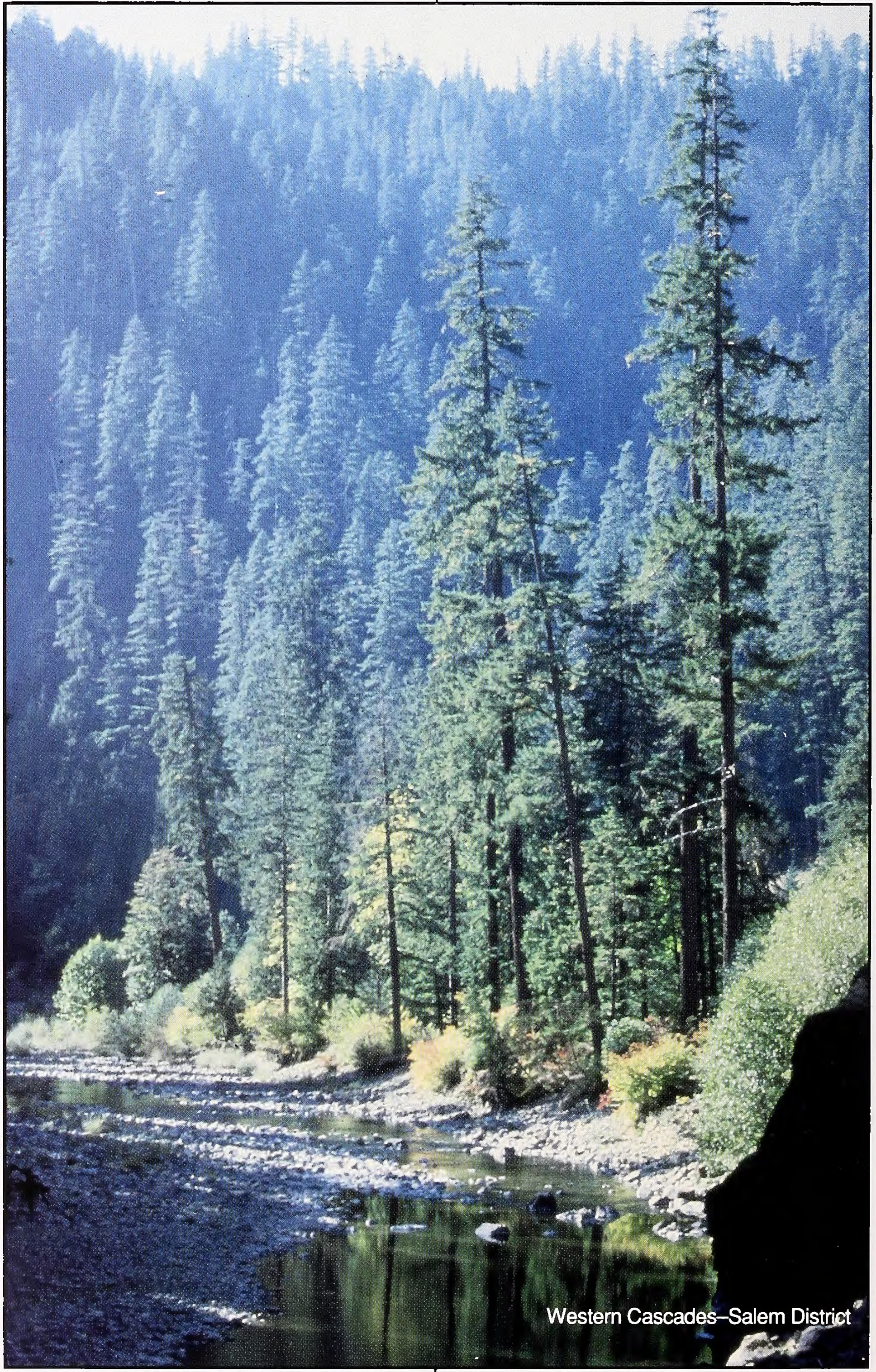
District Program Priorities
- ODFW/BLM 1987 Spotted Owl Agreement Sites
- East Beaver Creek Fish Habitat Improvement Project
- Upper Nestucca River Habitat Improvement Project
- Upper Lobster Creek Habitat Improvement Project
- Elk Creek Bald Eagle Habitat Area
- *Sidalcea nelsoniana* Pre-recovery Plan Management Area
- Salmon River Wild and Scenic River
- Sandy River Wild and Scenic River
- Quartzville Wild and Scenic River

Species (or Groups) and Habitats Emphasized in FW 2000

Species: Willamette Valley special status plants (15 species), other special status plants (*Erythronium elegans, Sidalcea nelsoniana, Poa marcida, Dodecathcan austrofrigidum*), Larch Mountain salamander, Oregon slender salamander, northern spotted owl, bald eagle, anadromous fish (chum, coho, and chinook salmon; steelhead trout and cutthroat trout), amphibians, and reptiles. (Note: See Appendix E for common names and status of plants.)

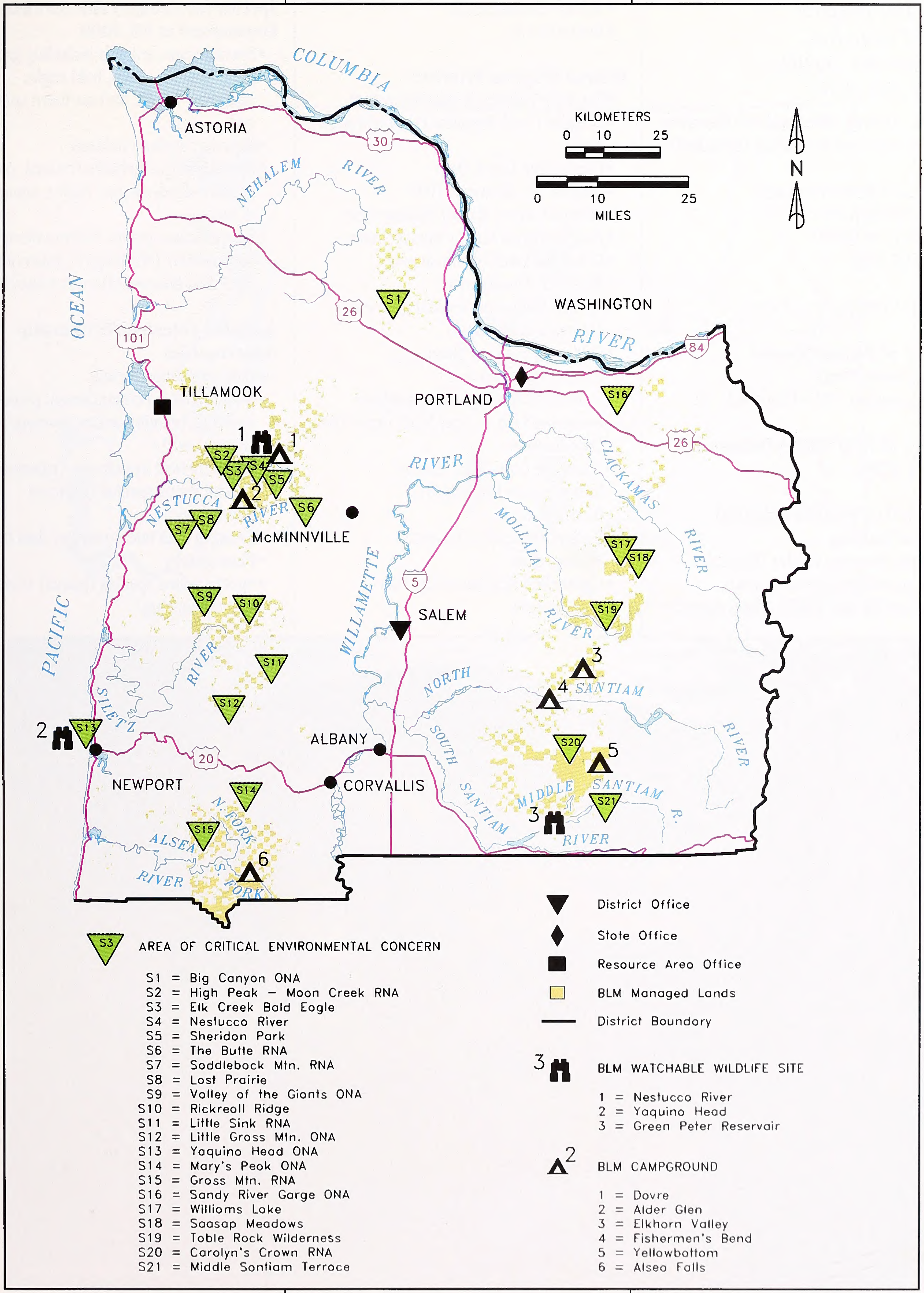
Habitat: Elk habitat, riparian habitat along perennial streams, and wetlands (mountain swamps, bogs, ponds) for amphibians

Available Volunteer/Partnership Opportunities
- ACEC plant inventory and monitoring
- Bald eagle monitoring (roost count)
- Northern spotted owl inventories and monitoring
- Marbled murrelet inventory and monitoring
- Fish rehabilitation and construction
- Riparian rehabilitation
- Other species of special status (wildlife)
- Special status plant inventory and monitoring



Western Cascades–Salem District

Salem District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ASTORIA
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NEHALEM
RIVER
KILOMETERS
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MILES
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RIVER
84
OCEAN
101
26
S1
TILLAMOOK
PORTLAND
S16
26
RIVER
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S2
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S5
2
NESTUCCA
RIVER
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S7
S8
McMINNVILLE
CLACKAMAS
MOLLALA
RIVER
S17
S18
5
SALEM
WILLAMETTE
S9
S10
S19
RIVER
PACIFIC
RIVER
S11
3
NORTH
4
SANTIAM
S12
SILETZ
2
S13
ALBANY
SOUTH
S20
5
RIVER
20
NEWPORT
CORVALLIS
S14
SANTIAM
MIDDLE
SANTIAM
S21
R.
N. FORK
3
S15
ALSEA
RIVER
6
S. FORK
RIVER
RIVER

S3 AREA OF CRITICAL ENVIRONMENTAL CONCERN

S1 = Big Canyon ONA
S2 = High Peak – Moon Creek RNA
S3 = Elk Creek Bald Eagle
S4 = Nestucca River
S5 = Sheridan Park
S6 = The Butte RNA
S7 = Saddleback Mtn. RNA
S8 = Lost Prairie
S9 = Valley of the Giants ONA
S10 = Rickreall Ridge
S11 = Little Sink RNA
S12 = Little Grass Mtn. ONA
S13 = Yaquina Head ONA
S14 = Mary's Peak ONA
S15 = Grass Mtn. RNA
S16 = Sandy River Gorge ONA
S17 = Williams Lake
S18 = Saasap Meadows
S19 = Table Rock Wilderness
S20 = Carolyn's Crown RNA
S21 = Middle Santiam Terrace

▼ District Office
◆ State Office
■ Resource Area Office
🟨 BLM Managed Lands
— District Boundary

3 BLM WATCHABLE WILDLIFE SITE

1 = Nestucca River
2 = Yaquina Head
3 = Green Peter Reservoir

▲2 BLM CAMPGROUND

1 = Dovre
2 = Alder Glen
3 = Elkhorn Valley
4 = Fishermen's Bend
5 = Yellowbottom
6 = Alsea Falls

Spokane District

E. 4217 Main Ave.
Spokane, WA 99202
(509) 353-2570

Offices - District Office and two Resource Areas: Border and Wenatchee (detached)

Wenatchee Resource Area
1133 N. Western Ave.
Wenatchee, WA 98801
(509) 662-4223

Size - 321,000 acres

Number of Habitat/Species Management Plans
- Implemented - 10
- Proposed - 10

Number of Fish/Wildlife/Botanical Related ACECs - 12

Current Fish/Wildlife/Botanical Program Staffing
- District Program Leader (Natural Resource Specialist w/riparian, biodiversity, and public affairs duties)
- Wildlife Biologists (2)
- Botanists (2)

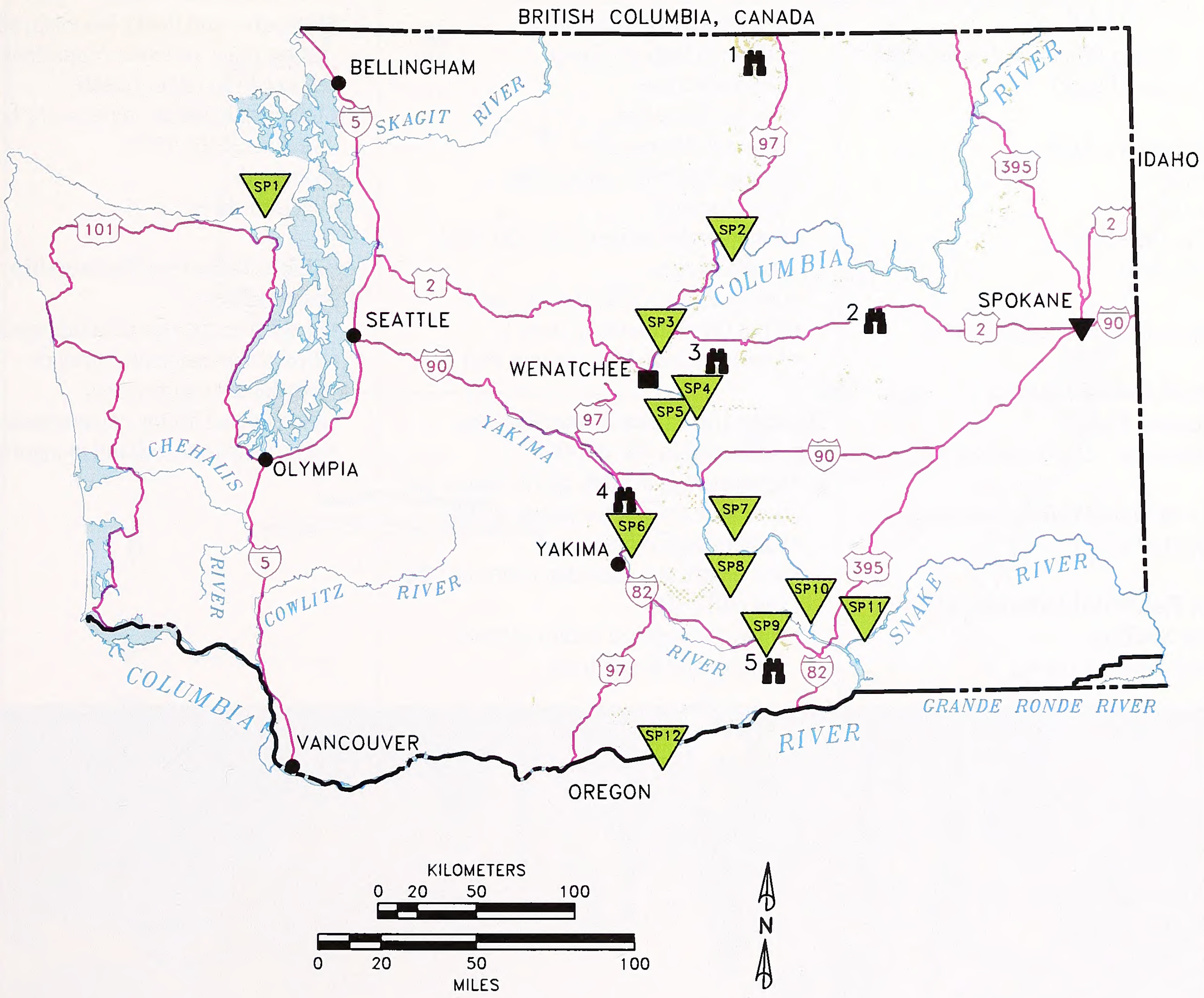
District Program Priorities
- San Juan Islands Coastal Ecosystem
- Douglas Creek Riparian Demonstration Area
- Upper Crab Creek QMA
- Lincoln Co. Showcase HMP
- Yakima Canyon Raptor Management
- Juniper Forest Raptor Management
- Columbia Basin Shrub-steppe Research/Management
- Special Status Species Management (plants and animals)
- California Bighorn Sheep Research/Management
- Statewide Bald Eagle, Spotted Owl, Peregrine Falcon, Gray Wolf, Grizzly Bear Coordination
- Challenge Cost-Share Habitat Improvement Projects
- Biodiversity
- Wetland/Waterfowl Research Management
- Channelled Scablands Riparian Management

Species (or Groups) and Habitats Emphasized in FW 2000
- Special status animals including grizzly bear, bighorn sheep, bald eagle, peregrine falcon, and northern spotted owl
- Riparian/wetland habitats
- Special/unique habitats (coastal, old growth, shrub-steppe, raptor, aquatic, ACEC)
- Special status plants: *Polemonium pectinatum* (Washington polemonium), *Tauschia hooveri* (Hoover's tauschia)

Available Volunteer/Partnership Opportunities
- Bald eagle monitoring
- Wildlife habitat enhancement projects (fencing, planting, water development, signing, etc.)
- Breeding bird inventories (riparian)
- Special status species (raptors) monitoring
- Entering data into computer data bases
- Photography
- Special status species (plants) inventory and monitoring

Riparian Habitat–Spokane District

Spokane District


BRITISH COLUMBIA, CANADA
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OREGON
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SEATTLE
OLYMPIA
WENATCHEE
SPOKANE
YAKIMA
VANCOUVER
SKAGIT RIVER
COLUMBIA
CHEHALIS
COWLITZ RIVER
RIVER
YAKIMA
RIVER
SNAKE RIVER
GRANDE RONDE RIVER
COLUMBIA RIVER
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SP12
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▼ District Office

■ Resource Area Office

🟨 BLM Managed Lands

— District Boundary

3 BLM WATCHABLE WILDLIFE SITE

1 = Split Rock Recreation Site
2 = Wilson Creek
3 = Douglas Creek
4 = Yakima River Canyon
5 = Badger Slope

SP3 AREA OF CRITICAL ENVIRONMENTAL CONCERN

SP1 = Iceberg Point and Point Colville
SP2 = Brewster Roost
SP3 = Earthquake Point
SP4 = Rock Island Canyon
SP5 = Colockum Creek
SP6 = Umtanum Ridge
SP7 = Sentinel Slope
SP8 = McCoy Canyon
SP9 = Yakima River
SP10 = Columbia River Islands
SP11 = Juniper Forest
SP12 = Roosevelt Slope

Vale District

100 Oregon Street
Vale, OR 97918
(503) 473-3144

Offices - District Office and one detached Resource Area (Baker)

Baker Resource Area
1550 Dewey
P.O. Box 987
Baker City, OR 97814
(503) 523-6391

Size - approximately 5 million acres

Number of Habitat/Species Management Plans

- Implemented - 15 •Proposed - 6

Number of Fish/Wildlife/Botanical Related ACECs - 13

Current Fish/Wildlife/Botanical Program Staffing

- District Program Leader
- Wildlife Biologists (3)
- Botanist
- Fishery Biologist

District Program Priorities

- California Bighorn Sheep Reintroductions
- Special Status Fish Research/Management
- Spring, Reservoir and Guzzler Developments
- Honeycombs-Leslie Gulch ACEC/RNA Botanical Area
- Crystal Palace CRMP for Big Game
- Trout Creek Mountains Area
- 5-year Riparian Management Plan

Species (or Groups) and Habitats Emphasized in FW 2000

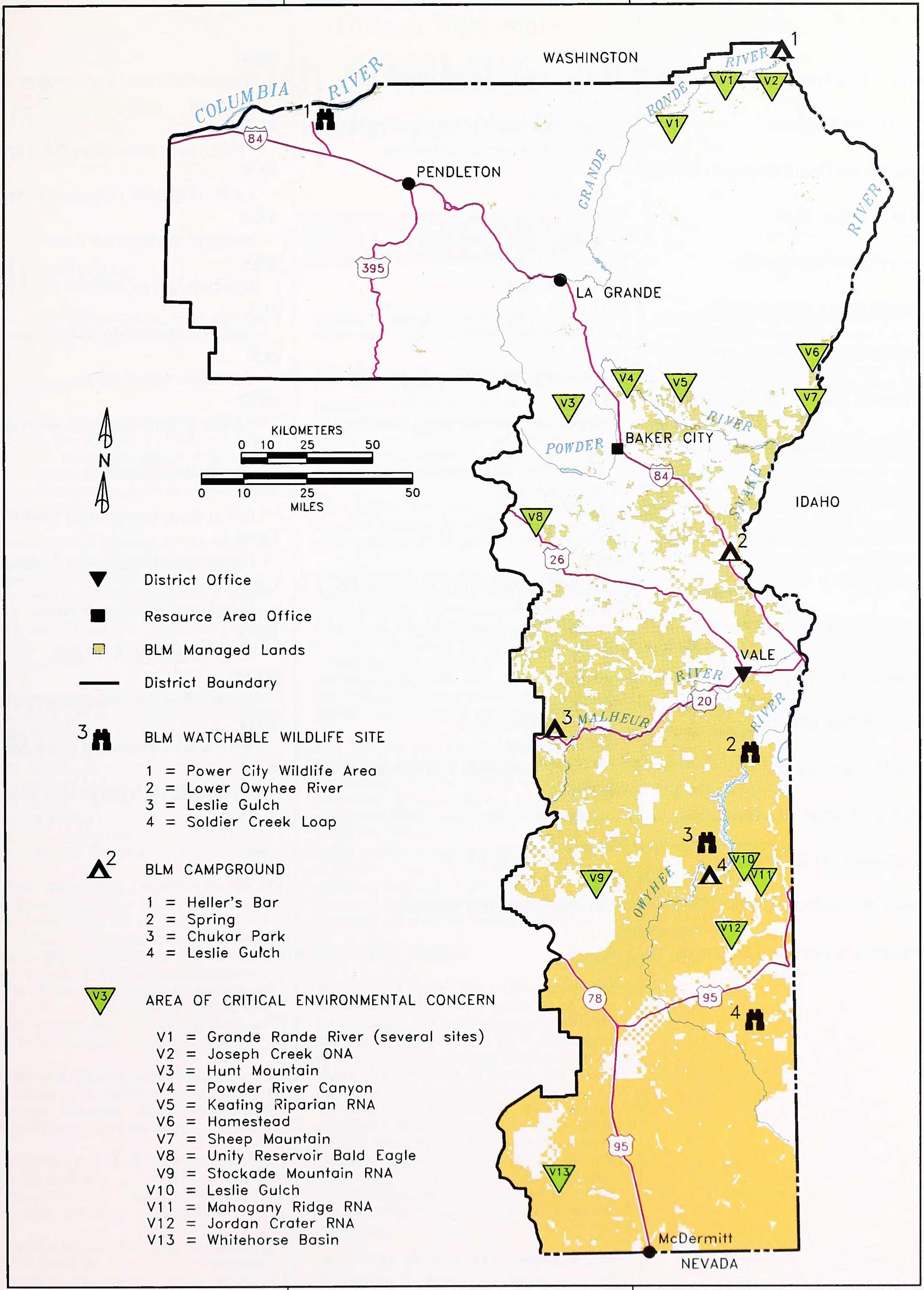
- Riparian habitats with special values for both fisheries and terrestrial wildlife
- Western sage grouse
- Red band trout, Lahontan cutthroat trout and bull trout
- Willow/Whitehorse cutthroat trout; rainbow and brook trout
- Special status plant taxonomy and demographics for a large number of unusual species associated with volcanic soils of eastern Oregon
- Mule deer and Rocky Mountain elk winter range problems/opportunities especially in Baker County
- Terrestrial habitats impacted by large wildfires in the 1980s
- Songbirds
- Bighorn sheep

Available Volunteer/Partnership Opportunities

- Inventories for special status species
- Riparian enhancement projects
- Fish habitat improvement
- Recreational fishing enhancement
- Stream/riparian/wetland monitoring

Owyhee Country—Vale District

Vale District


WASHINGTON
COLUMBIA RIVER
GRANDE RONDE RIVER
RIVER
PENDLETON
84
395
LA GRANDE
POWDER RIVER
BAKER CITY
SNAKE
IDAHO
26
VALE
MALHEUR RIVER
RIVER
20
OWYHEE
78
95
McDermitt
NEVADA
V1
V2
V3
V4
V5
V6
V7
V8
V9
V10
V11
V12
V13
1
2
3
4
N
KILOMETERS
0 10 25 50
0 10 25 50
MILES
District Office
Resource Area Office
BLM Managed Lands
District Boundary
3 BLM WATCHABLE WILDLIFE SITE
1 = Power City Wildlife Area
2 = Lower Owyhee River
3 = Leslie Gulch
4 = Soldier Creek Loop
2 BLM CAMPGROUND
1 = Heller's Bar
2 = Spring
3 = Chukar Park
4 = Leslie Gulch
V3 AREA OF CRITICAL ENVIRONMENTAL CONCERN
V1 = Grande Rande River (several sites)
V2 = Joseph Creek ONA
V3 = Hunt Mountain
V4 = Powder River Canyon
V5 = Keating Riparian RNA
V6 = Homestead
V7 = Sheep Mountain
V8 = Unity Reservoir Bald Eagle
V9 = Stockade Mountain RNA
V10 = Leslie Gulch
V11 = Mahogany Ridge RNA
V12 = Jordan Crater RNA
V13 = Whitehorse Basin

Acronyms

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
APHIS	Animal & Plant Health Inspection Service
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
CMA	Cooperative Management Agreements
CRMP	Coordinated Resource Management Plan
EEA	Environmental Education Area
ESA	Endangered Species Act
FLPMA	Federal Land Policy & Management Act
FS	Forest Service
FTE	Full time equivalent
FW 2000	(National) Fish & Wildlife 2000
FWS	Fish and Wildlife Service
HMP	Habitat Management Plan
IWLA	Izaak Walton League of America, Inc.
MOU	Memorandum of Understanding
MFP	Management Framework Plan
MLR	Management of Lands and Resources
NEPA	National Environmental Policy Act
NCASI	National Council of the Paper Industry for Air & Stream Improvement
NG	Non-game
NNL	National Natural Landmark
NP	National Park
NPS	National Park Service
NWLIS	Northwest Land Information System
NWPPC	Northwest Power Planning Council
O&C	Oregon and California Revested Railroad Lands
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish & Wildlife
ONA	Outstanding National Area
OR	Oregon
OR/WA	Oregon/Washington
OR/WA FW2000	Oregon/Washington Fish & Wildlife 2000
OSDF	Oregon State Department of Forestry
OSU	Oregon State University
OWF	Oregon Wilderness Federation
OWIC	Oregon Watershed Improvement Coalition
PLRTF	Public Lands Restoration Task Force
PNW	Pacific Northwest (Experiment Station)
RMP	Resource Management Plan
RNA	Research Natural Area
SCA	Student Conservation Association
SCS	Soil Conservation Service
STEP	Salmon & Trout Enhancement Program
TNC	The Nature Conservancy
USCS	United States Conservation Service
USDA	United States Department of Agriculture
USGS	United States Geologic Service
USFW	United States Fish & Wildlife
WHMA	Waterfowl Habitat Management Area
WDW	Washington Department of Wildlife
WO	Washington (National BLM) Office

Appendix A

Authorities

An overview of the legislative and executive direction for the Bureau's fish, wildlife, and botanical program is set forth below.

A. Legislation

1. ***The Bald Eagle Protection Act of 1940*** provides for the cancellation of leases, licenses, permits, or other agreements authorizing livestock grazing on Federal lands of persons convicted of violating the Act or any implementing regulation or permit.

2. ***The Endangered Species Act of 1973***, as amended, provides for the protection of endangered species, threatened species, and their habitats, and requires Federal agencies to ensure that the continued existence of listed species is not jeopardized and that designated Critical Habitat of listed species is not destroyed or adversely modified.

3. ***The Federal Land Policy and Management Act of 1976*** directs that the public lands be managed in a manner that will provide food and habitat for fish and wildlife. Section 201(a) provides for the preparation and maintenance of an inventory of public land resources on a continuing basis. Section 40(b)(1) authorizes the use of Range Betterment Funds for the protection, maintenance, rehabilitation, improvement, and management of wildlife habitat.

4. ***The Fish and Wildlife Coordination Act of 1958*** directs that wildlife conservation be given equal consideration and be coordinated with other features of water-resource development programs, and requires that possible damage to fish and wildlife resources, from work planned in navigable waters and drainages, be assessed and that measures be adopted for preventing such losses or damages, as well as for development and improvement, of wildlife and fishery resources.

5. ***The Fish and Wildlife Improvement Act of 1978*** authorizes the Secretary to permit taking of golden eagle nests which interfere with resource development or recovery operations.

6. ***The Migratory Bird Conservation Act of 1929***, as amended, and treaties pertaining thereto, provide for habitat protection and enhancement of protected migratory birds.

7. ***The Public Rangelands Improvement Act of 1978*** directs that the condition of the public rangelands be improved so that they become as productive as feasible for wildlife habitat and other rangeland values. The Act provides for on-the-ground funding of wildlife habitat protection, improvement, and maintenance projects.

8. ***The Sikes Act of 1974***, as amended, provides for the conservation, restoration, and management of species and their habitats in cooperation with State wildlife agencies, including establishment of hunting and fishing stamp programs with revenues to be spent upon lands on which fees are collected.

9. ***The Taylor Grazing Act of 1934***, as amended, provides for wildlife management on public lands.

10. ***The Wild Free-Roaming Horse and Burro Act of 1971*** requires that management activities for wild horses and burros be carried out in consultation with State wildlife agencies in order to protect the natural ecological balance of all wildlife species inhabiting the land, particularly endangered wildlife, and requires that any adjustments in forage allocations take into consideration the needs of all wildlife species.

11. ***The Oregon and California Sustained Yield Act of 1937*** directs that the lands administered under the Act shall be managed for permanent forest production, and the timber thereon shall be sold, cut and removed in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow and contributing to the economic stability of local communities and industries, and providing recreational facilities.

B. Executive Orders

1. ***EO 11990 of May 1977 (Protection of Wetlands)*** directs Federal agencies to minimize the destruction, loss, and degradation of wetlands, and to preserve and enhance the beneficial values of wetlands. In administering activities, agencies must evaluate the effects of the proposed actions on the survival and quality of wetlands. All federally initiated, financed, or permitted construction projects in wetlands must include all practical measures to minimize adverse impacts. All leases, rights-of-way, easements, and disposals involving Federal wetlands must contain restrictions to uses by the grantee which are consistent with Federal, State, and local wetland regulations.

2. ***EO 11988 of May 1977 (Floodplain Management)*** directs each Federal agency to evaluate the potential effects of its actions on floodplains and to ensure that its planning programs and budget requests take flood hazards and floodplain management into account. Federal agencies are to take actions to reduce the risk of flood loss, to minimize the impacts of floods, and to restore and preserve the natural and beneficial values of floodplains.

3. ***EO 11989 of May 1977 (Off-Road Vehicles)*** directs heads of Federal agencies to close areas to ORV use whenever it is determined that use of ORVs is or will cause considerable adverse impact on soil, vegetation, wildlife, wildlife habitat, or certain other resources on the public lands. Agencies are also authorized to adopt the policy that portions of the public lands shall be closed to ORVs except for designated open areas and trails.

4. ***EO 11987 of May 1977 (Exotic Organisms)*** directs executive agencies, to the extent permitted by law, to restrict the introduction and/or importation and funding of exotic species into natural ecosystems on lands they administer. It also encourages State, local governments, and private citizens to prevent introduction of exotic species.

National Policies

There are situations where the directives contained in the various laws, regulations, Department policies, and Executive Orders are subject to interpretation. In such cases, Bureau policies guide managers in planning and decision-making. The following provides a general framework of guidance for the Bureau's fish, wildlife, and botanical program:

1. Recognize State management of resident species and that a State/Federal partnership is essential for species/habitat management programs. In working with the states, the BLM will continue to use its authority under the Sikes Act as one of the primary means for achieving effective coordination.

2. Forge strong and effective communications and coordination between the fish,wildlife, and botanical program and other BLM programs, encouraging interdisciplinary teamwork in the development of resource management options that meet fish, wildlife, and botanical objectives.

3. Initiate active cooperation with State, local, and other Federal agencies, in all facets of the fish, wildlife, and botanical program. These agencies are encouraged to maximize use of available resources by providing funds, equipment, or exchanging information and skills needed for fish, wildlife, and botanical management.

4. Create opportunities for broad public involvement that will foster awareness, support, assistance, and participation in cooperative programs that enhance fish, wildlife, and botanical habitat.

5. Actively encourage Cooperative Management Agreements with fish, wildlife, and botanical management agencies and organizations, other conservation interests, and public service groups.

6. Focus inventory, monitoring, and research efforts in areas of high priority for fish, wildlife, and botanical values, concerns, opportunities, and where public interest or controversy exists.

7. Develop recommendations for fish, wildlife, and botanical habitat management based on analysis of ecological conditions, legal mandates, Federal goals for migratory species and federally listed threatened or endangered species, State goals for resident species populations, social and economic values, and concerns of the public.

8. Maximize fish, wildlife, and botanical resource opportunities through program initiatives such as HMPs, CMAs, and constructive interaction with other resource uses and activities.

9. Conduct investment analyses to ensure that all habitat improvement plans constitute the most cost-effective means of achieving stated management objectives for fish, wildlife, and botanical habitat.

10. Develop incentives to encourage benefitting users, including local governments, interest groups, and individuals, to invest in fish, wildlife, and botanical habitat management and enhancement.

11. Strengthen and improve the professional, technical, interdisciplinary, and managerial skills of BLM's personnel in fish, wildlife, and botanical disciplines to enhance their performance and increase job satisfaction.

12. Acquire land for fish, wildlife, and botanical purposes only when other means of achieving program goals and objectives are not appropriate, available, or effective, giving full consideration to exchanges or other alternatives.

13. Give priority consideration in all BLM activities to the protection, enhancement, and recovery of T/E species.

14. Maintain and rehabilitate existing habitat management facilities to provide maximum public benefit and to protect prior investments.

15. Identify, designate, and manage Areas of Critical Environmental Concern and Research Natural Areas in support of state natural heritage programs and the interagency Research Natural Area Committee recommendations.

Memoranda of Understanding and Cooperative Agreements

National Level

MOU/CA	Participants	Title/Summary Subject	Effective Date
WO-202	BLM/FWS/FS/ Ducks Unlimited	Development of selected wetlands to increase waterfowl populations	03/14/84
WO-217	BLM/FS	Coordinated Land Use and Resource Management Planning	08/05/86
WO-220	BLM/FWS	Policies & interagency relationship on resource planning and management	12/24/86
WO-229	BLM/APHIS (Dept. of Agriculture)	Animal damage control	09/16/87
WO-233	BLM/Quail Unlimited	Enhancement of wild quail productivity management	06/11/88
WO-234	BLM/Trout Unlimited	Enhancement of BLM coldwater habitats to improve trout and salmon management	12/02/88
WO-238	BLM/Rocky Mountain Elk Federation	Maintenance and enhancement of elk habitats on BLM lands	02/18/88
WO-240	BLM/Found. for North Am. Wild Sheep	Maintenance and enhancement of wild sheep habitats	10/19/88
WO-241	BLM/National Wild Turkey Federation	Maintenance and enhancement of wild turkey habitats on BLM lands	02/25/88
WO-242	BLM/Mule Deer Found.	Maintenance and enhancement of mule deer habitats on BLM lands	03/25/89
WO-245	BLM/Ducks Unlimited	Implementation of BLM's strategy plan for waterfowl habitat management	02/20/90
WO-251	BLM/TNC	Sharing of information on ecological resources; emphasis on potential ACECs	03/23/90
WO-252	BLM/Pheasants Forever	Maintenance and enhancement of wild pheasant habitats	03/19/90
WO-254	BLM/National Rifle Assn.	Cooperative efforts in public land management	05/25/90
OR-90-255	BLM/Center for Plant Conservation	Cooperative agreement with Center for Plant Conservation to store and propagate special status species	01/21/90
Not Numbered	BLM/Times/ Mirror Conser. Council	Memorandum of agreement regarding dissemination of information about conservation of natural resources	05/24/90

Memoranda of Understanding and Cooperative Agreements

Number	Participants	Title/Summary Subject	Effective Date
OR-14	ODFW, OR State Game/BLM	Protection & maintenance of the Public lands and management of the fish and wildlife res. of the State of Oregon	03/21/61
OR-16	BLM/OR State Game	Development and maintenance of wildlife resources & related management activities on Public lands, White River Game Management Area, Wasco County, Oregon	3/20/61
OR-17	BLM/OR State Game	Development & maintenance of wildlife resources & related management activities on Public lands, Wenaha Game Management Area, Wallowa County, Oregon	3/20/61
OR-18	BLM/OR State Game	Big Game Winter Ranges	3/30/61
OR-19	BLM/OR State Game	Administration of Fish & Wildlife Resources and Facilities of the Upper Portion of the Prineville Reservoir, Crooked River Project, Oregon	12/19/61
OR-28	BLM/WDW	To cooperate in the restoration, harvesting & general management of Fish & Wildlife Resources of the State of Wash. Consistent with the Multiple Land Use Program (includes Amendments)	2/10/64
OR-31	BLM/USFS	Conducting Wildlife Habitat Research	4/3/65
OR-41	BLM/OR State Fish Comm.	Cooperate in the management of public lands under jurisdiction of BLM and the Fish Commission	1/23/67
OR-51	BLM/OR State Fish Comm.	Improve wildlife habitat & range carrying capacity through recognized development practices	11/25/69
OR-65	BLM/USFS/FS/NP	Cooperate in locating & establishing research natural areas	6/1/72
OR-73 OR-99 OR-108 OR-110 OR-124 OR-205	BLM/ODFW	Restrict operation of motor-propelled vehicles where wildlife or wildlife habitat is damaged; Deer season road closure	12/27/72 3/18/76 8/6/76 9/15/76 4/25/77 10/23/80
OR-75	BLM/OR State Game	Lands added to the Baker Game Management Area	4/24/73
OR-82	BLM/OR State Game	Wildlife resource improvement project	1/17/74
Not Numbered	BLM//OR Wildlife Commission	Sikes Act Implementation	5/19/75
OR-90	BLM/USFS/ODFW	Resource Management Plan for lands called Murderers Creek Resource Management Area	8/25/75
OR-98	BLM/ODFW	Developing, maintaining, and improving wildlife habitat, increasing wildlife abundance & improving a public hunting opportunity	4/23/76
OR-100	BLM/USFS	Coordinate timber/wildlife mgmt. of forest lands in the public domain in Eastern Oregon	5/13/76

Memoranda of Understanding and Cooperative Agreements

Number	Participants	Title/Summary Subject	Effective Date
OR-112	BLM/ODFW	Cooperation with State of Oregon in management of fish and wildlife resources of the State of Oregon (Sikes Act implementation)	10/27/76
		Supplement	9/26/83
OR-115	BLM/State of WA/ Dept. of Game	The Dept. of Game shall collect fecal samples on Chokaka Mountain for all specified species in a representative manner and arrange for their transport to the Composition Analysis Laboratory in Fort Collins, CO. BLM shall provide funds for the analysis of the fecal samples.	2/4/77
OR-119	BLM/USFS/BIA/ FWS/ODFW Nat. Res./Soils Cons./ Coop.Ex. Serv. Cons. Comm.	Coordinated Resource Planning in Washington Appendix D & E	3/24/76 12/16/81
OR-130	BLM/Wash. Dept. of Natural Resources	Washington Natural Heritage Program.	9/16/85
OR-138	BLM/FWS	Management of BLM Lands within White River Game Mgmt. Area	8/9/77
OR-164	BLM/FWS	Provide mutual understanding for reimbursement of costs for endangered species studies; designed to provide needed information of mutual benefit on T/E plants in Oregon and Washington	3/15/79
OR-183	BLM/Sport Fisheries & Wildlife	For the administration of OR-CA Railroad Grant Lands in the William L. Finley National Wildlife Refuge	8/28/70
OR-224	BLM/USFS	Western Oregon Habitat Relationships study	4/2/81
OR-225	BLM/USFS	To provide mutual understanding re: evaluating the importance of logs as structural components of wildlife habitats in old growth Douglas-fir forests and to account for their importance in those managed forests. The product will be a document on dead and down timber management, useful in the planning and management of fish and wildlife habitat in Western Oregon.	2/29/82
OR-237	BLM/USFS	To provide mutual understanding with regard to a research and development project on old-growth forest wildlife habitat in Western Oregon and Washington.	4/1/82
OR-256	BLM/Wash. Dept. of Fisheries	(Sikes Act Supplement) to provide for the management of BLM land so as not to damage fish resource under jurisdiction of the Washington Department of Fisheries.	6/75
OR-257	BLM/Wash. Dept. of Fisheries	(Sikes Act Supplement) To provide a working relationship and procedure for implementation of the Sikes Act.	6/75
OR-283	BLM/USFS/OSU ODA/OSDF/USCS/ FWS/OR Assn. of Cons. Dist.	Coordinated Resource Management and Planning in Oregon	4/84

Memoranda of Understanding and Cooperative Agreements

Number	Participants	Title/Summary Subject	Effective Date
OR-312	BLM/State of OR/USFS	To jointly identify, communicate and coordinate actions of common concerns related to the administration of lands and resources and provide a mechanism for continuing involvement in the development and revision of land management and land use plans.	1/86
OR-232	BLM/ODFW/USFS, Reg. 6/PLRTF/IWLA OWF/OWIC/Others	Coordination of Volunteers to aid in the restoration of the riparian (water) resources of Oregon.	3/16/87
OR-324	BLM/TNC	To define areas of interest and cooperation and to describe common objectives related to the identification, protection and management of natural heritage resources in Oregon and Washington.	3/31/87
OR-327	BLM/USFS/ OR Trout Inc.	Fish Habitat Improvement in Oregon	4/87
OR-330	BLM/USFWS	Local procedures agreement with respect to BLM review of Dept. of Army permit applications.	6/87
OR-351	BLM/SCS/USFS/ BIA/FWS/USGS/ BPA/ACOE/NWPPC/ States of OR/WA	Establishment of the Northwest Land Information System (NWLIS) Network	8/87
OR-352	BLM/ODFW	To define the sharing and/or exchange of electronic data on animals protected by the Endangered Species Act.	2/21/91

Fish & Wildlife 2000 Plans

The following is a listing of the initial BLM Fish and Wildlife 2000 reports and the various strategic plans that have been produced through 1990 or are in the development stage. Copies of the various reports can be obtained through the BLM Oregon State Office.

- Fish and Wildlife 2000: A Plan for the Future. 30 p., 1987.

Fisheries

- Anadromous Fish Habitat Management on Public Lands: A Strategy for the Future. 32 p., 1988.
- Fisheries Habitat Management on Public Lands: A Strategy for the Future. 36 p., 1989.

Wildlife

- Waterfowl Habitat Management on Public Lands: A Strategy for the Future. 43 p., 1989.
- Raptor Habitat Management Under the U.S. Bureau of Land Management Multiple-Use Mandate. Raptor Research Report No. 8, Raptor Research Foundation. 80 p., 1989.

In preparation:

- Upland Game Habitat Management
- Big Game Habitat Management Plan
- Watchable Wildlife
- Animal Inn
- Non-game Bird Habitat Management

Threatened/Endangered Species

In preparation:

- Conservation of Rare Plants and Natural Plant Communities
- Special Status Fish

Administrative

- Findings: Career Management Team for Wildlife and Fisheries Biologists. 55 p., 1987.

In preparation:

- Wildlife and Fisheries Information System (WFIS)
- Strategy Plan for Training Personnel in BLM Wildlife and Fisheries Program.

SPECIAL STATUS SPECIES: PLANTS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE

AUGUST 1990

	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Abronia umbellata ssp. *breviflora* pink sand-verbena	FC2	SE			S
Allium constrictum Douglas' constricted onion	FC2				D
Amsinckia carinata Malheur Valley fiddleneck	FC1	ST			D
Arabis koehleri var. *koehleri* shrubby rock cress	FC2	SC			S
Arenaria franklinii var. *thompsonii* Thompson's sandwort		SC		BS	S
Arenaria paludicola marsh sandwort	FC1				S
Artemisia campestris var. *wormskioldii* northern wormwood	FC1	SC			S
Artemisia ludoviciana ssp. *estesii* Estes' wormwood	FC2				D
Aster curtus curtus aster; white-topped aster	FC2				D
Aster gormanii Gorman aster	FC2	SC			D
Aster jessicae Jessica's aster	FC2				S
Aster vialis wayside aster	FC2	SC			D
Astragalus applegatei Applegate's milk-vetch	FC1	SE			S
Astragalus collinus var. *laurentii* Laurence's milk-vetch	FC2	SC			S
Astragalus columbianus Columbia milk-vetch	FC2				D
Astragalus diaphanus var. *diurnis* South John Day milk-vetch	FC2	SC			D
Astragalus kentrophyta var. *douglasii* Douglas' milk-vetch		SC		BS	S
Astragalus mulfordiae Mulfords' milk-vetch	FC2	SC			D
Astragalus peckii Pecks' milk-vetch	FC2	SC			D
Astragalus sinuatus Whited milk-vetch	FC2	SC			D
Astragalus pulsiferae var. *suksdorfii* Ames' milk-vetch				BS	S
Astragalus solitarius weakstemmed milk-vetch	FC2				D

SPECIAL STATUS SPECIES: PLANTS (Except Assessment Species) **BUREAU OF LAND MANAGEMENT** **OREGON STATE OFFICE** **AUGUST 1990**	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Astragalus sterilis sterile milk-vetch	FC2	SC			D
Astragalus tegetarioides bastard kentrophyta	FC2	SC			D
Astragalus tyghensis Tygh Valley milk-vetch	FC2	SC			D
Bensoniella oregona bensoniella	FC2				D
Botrychium crenulatum crenulate moonwort	FC2	SC			D
Botrychium pumicola Crater Lake grape fern	FC1	SC			S
Calamagrostis crassiglumis Thurber's reedgrass	FC2				S
Calochortus coxii Cox's mariposa	FC2	SC			D
Calochortus greenei Greene's mariposa	FC2	SC			D
Calochortus howellii Howell's mariposa-lily	FC2	SC			D
Calochortus longebarbatus var. *longebarbatus* long-bearded mariposa-lily		SC		BS	S
Calochortus longebarbatus var. *peckii* Peck's long-bearded mariposa	FC2				D
Calochortus nitidus broad-fruit mariposa	FC1				S
Calochortus umpquaensis Umpqua mariposa-lily	FC2	SE			D
Camassia howellii Howell's camas	FC2	SC			D
Cardamine gemmata purple-tubed toothwort	FC2				D
Cardamine pattersonii Saddle Mountain bitter cress	FC2	SC			S
Carex scabriuscula Cascade sedge		SC		BS	S
Castilleja chlorotica green-tinged paintbrush	FC2	SC			D
Castilleja levisecta golden paintbrush	FC1	SC			S
Castilleja pilosa var. *steenensis* Steen's Mountain paintbrush	FC2				D
Collomia mazama Crater Lake collomia	FC2				S
Collomia renacta Barren Valley collomia	FC2	SC			D

SPECIAL STATUS SPECIES: PLANTS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE

AUGUST 1990

	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Cordylanthus maritimus ssp. *palustris* northcoast birds-beak, salt marsh birds-beak	FC1	SC			D
Corydalis aquae-gelidae cold-water corydalis	FC2				S
Cypripedium calceolus var. *parviflorum* yellow-lady's slipper				BS	S
Delphinium leucophaeum white rock larkspur	FC2	SC			S
Delphinium oreganum Oregon larkspur		SC		BS	S
Delphinium pavonaceum peacock larkspur	FC2	SC			S
Delphinium viridescens Wenatchee larkspur	FC1				S
Dodecatheon austrofrigidum frigid shootingstar				BS	D
Epilobium oreganum Oregon fireweed		SC		BS	D
Erigeron basalticus basalt daisy	FC1				D
Erigeron decumbens var. *decumbens* Willamette daisy	FC1	SE			S
Erigeron howellii Howell's fleabane	FC2				S
Eriogonum chrysops golden buckwheat	FC1	SC			D
Eriogonum crosbyae Crosby's buckwheat	FC2	SC			D
Eriogonum cusickii Cusick's buckwheat	FC2	SC			D
Eriogonum prociduum prostrate buckwheat		SC		BS	D
Erythronium elegans Coast Range fawn-lily	FC2	SC			D
Frasera umpquaensis Umpqua green-gentian	FC2				D
Fritillaria gentneri Gentner mission-bells	FC2	SC			D
Galium serpenticum ssp. *warnerense* Warner Mountains bedstraw		SC		BS	S
Gentiana plurisetosa elegant gentian				BS	S
Gentiana bisetaea (see *G. setigera*)					
Gentiana setigera Mendocino gentian	FC2	SC			D

SPECIAL STATUS SPECIES: PLANTS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE

AUGUST 1990

	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Gratiola heterosepala Boggs Lake hedge-hyssop	FC2	SC			D
Hackelia cronquistii Cronquist's stickseed; Malheur forget-me-not	FC1	SC			D
Hackelia venusta showy stickseed	FC1				S
Haplopappus liatriformis palouse goldenweed	FC2				S
Haplopappus radiatus (Snake River) goldenweed	FC1	SE			D
Hastingsia bracteosa large-flowered rush-lily	FC1	SC			D
Howellia aquatilis howellia	FC1				S
Ivesia rhypara var. *rhypara* grimy ivesia	FC2	SC			D
Ivesia rhypara var. *shellyi* Venator Canyon ivesia	FC2				D
Lepidium davisii Davis' pepper cress	FC2	SC			D
Leptodactylon pungens var. *hazeliae* Hazel's prickly-phlox	FC2				S
Lilium occidentale western lily	FC1	SE			S
Limnanthes floccosa ssp. *bellingeriana* Bellinger's meadowfoam	FC2	SC			D
Limnanthes floccosa ssp. *pumila* dwarf meadowfoam	FC1	SC			D
Lobelia kalmii Kalm's lobelia				BS	S
Lomatium bradshawii Bradshaw's desert-parsley	FE	SE			D
Lomatium cookii Cook's lomatium	FC1	SE			D
Lomatium laevigatum smooth desert-parsley	FC2				D
Lomatium suksdorfii Suksdorf's desert-parsley	FC2				D
Lomatium tuberosum Hoover's desert-parsley	FC2				D
Luina serpentina colonial luina	FC1	ST			D
Lupinus biddlei Biddle's lupine	FC2	SC			D

SPECIAL STATUS SPECIES: PLANTS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE

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	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Lupinus cusickii Cusick's lupine	FC2	SC			D
Lupinus sulphureus var. *kincaidii* Willamette Valley lupine	FC2	SC			D
Meconella oregana Oregon meconella		SC		BS	S
Mentzelia mollis smooth stickleaf	FC2	SC			D
Mentzelia packardiae Packard's stickleaf	FC2	ST			D
Microseris howellii Howell's microseris	FC2	SC			D
Mimulus clivicola bank monkeyflower	FC2				S
Mimulus jungermannioides liverwort monkeyflower		SC		BS	D
Mimulus patulus stalk-leaved monkeyflower	FC2	SC			S
Mimulus pygmaeus Egg Lake monkeyflower	FC2	SC			D
Mimulus washingtonensis var. *washingtonensis* Washington monkeyflower	FC2	SC			D
Mirabilis macfarlanei MacFarlane's four-o'clock	FE	SE			S
Montia howellii Howell's montia	FC2	SC			D
Myosurus minimus ssp. *apus* little mousetail	FC2	SC			S
Oxytropis campestris var. *wanapum (sp. nov. ined.)*				BS	D
Penstemon barrettiae Barrett's penstemon	FC2	SC			D
Penstemon glaucinus beardtongue; blue-leaved penstemon	FC2				D
Penstemon peckii Peck's penstemon	FC2				S
Perideridia eyrthrorhiza red-root yampah	FC2	SC			D
Petrophytum cinerascens Chelan rockmat	FC1				D
Phacelia argentea sand dune phacelia; silvery phacelia	FC2				D
Phacelia lenta sticky phacelia	FC2				D

SPECIAL STATUS SPECIES: PLANTS (Except Assessment Species) **BUREAU OF LAND MANAGEMENT** **OREGON STATE OFFICE** **AUGUST 1990**	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Phacelia lutea var. *mackenzieorum* MacKenzie's phacelia		SC		BS	D
Plagiobothrys figuratus var. *corallicarpus* coral seeded allocarya	FC2				S
Plagiobothrys hirtus var. *corallicarpus* see *P. figuratus* var. *corallicarpus*					
Plagiobothrys hirtus popcornflower; rough allocarya	FC1	SE			S
Plagiobothrys lamprocarpus popcornflower	FC2	SC			S
Pleuropogon oregonus Oregon semaphore grass	FC1	ST			S
Poa laxiflora loose-flowered bluegrass		SC		BS	D
Poa unilateralis sea cliff bluegrass	FC2				S
Polemonium pectinatum Washington polemonium	FC1				D
Ranunculus austro-oreganus southern Oregon buttercup	FC2				D
Ranunculus reconditus obscure buttercup	FC1	SC			S
Rorippa columbiae Columbia yellow-cress	FC2	SC			D
Rubus nigerrimus northwest raspberry	FC1				S
Saxifraga hitchcockiana Saddle Mountain saxifrage	FC2	SC			S
Sedum moranii Reid's stonecrop; Rogue R. stonecrop	FC2	SC			D
Sedum oblanceolatum Applegate stonecrop	FC2				D
Senecio ertterae Ertter's ragwort	FC1	ST			D
Senecio hesperius western senecio	FC2	SC			D
Sidalcea nelsoniana Nelson's checkermallow	FC1	ST			D
Sidalcea oregana var. *calva* Oregon checkermallow	FC1				S
Silene douglasii var. *oraria* Cascade Head catchfly	FC2	SC			S
Silene spaldingii Spalding's campion; Spalding's silene	FC2	SC			S

SPECIAL STATUS SPECIES: PLANTS (Except Assessment Species) **BUREAU OF LAND MANAGEMENT OREGON STATE OFFICE** **AUGUST 1990**	**1990 Federal Register Notice of Review**	**Oregon State Status**	**Washington State Status**	**Bureau Sensitive Status**	**Occurrences**
Sisyrinchium sarmentosum pale blue-eyed grass	FC2	SC			S
Sophora leachiana western sophora	FC2				D
Stephanomeria malheurensis Malheur wirelettuce	FE	SE			D
Sullivantia oregana Oregon sullivantia	FC2	SC			S
Swertia umpquaensis *See Frasera umpquaensis*					
Tauschia hooveri Hoover's tauschia	FC2				D
Thelypodium eucosmum arrow-leaf thelypody	FC2	SC			D
Thelypodium howellii ssp. *spectabilis* Howell's spectacular thelypody	FC1	SE			S
Trifolium leibergii Leiberg's clover	FC2	SC			D
Trifolium owyheense Owyhee clover	FC2	SC			D
Trifolium thompsonii Thompson's clover	FC1				D
Viola lanceolata ssp. *occidentalis* western bog violet		SC		BS	D

SPECIAL STATUS SPECIES: ANIMALS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
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	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
BIRDS					
Agelaius tricolor tricolored blackbird	FC2				S
Brachyramphus marmoratus marbled murrelet	FC2				D
Branta canadensis leucopareia Aleutian Canada goose	FE	SE	SE		D
Buteo regalis ferruginous hawk	FC2		ST		D
Centrocercus urophasianus phaios western sage grouse	FC2				D
Charadrius alexandrinus nivosus western snowy plover	FC2	ST	SE		D
Diomeda albatross short-tailed albatross	FE	SE			S
Falco peregrinus (includes *anatum & tundrius*) peregrine falcon (includes American & Artic)	FE	SE	SE		D
Grus canadensis sandhill crane			SE		D
Haliaeetus leucocephalus bald eagle	FT	ST	ST		D
Numenius americanus long-billed curlew	FC2				D
Pelecanus erythrorhynchos white pelican			SE		D
Pelecanus occidentalis brown pelican	FE	SE	SE		D
Plegadis chihi white-faced ibis	FC2				D
Strix occidentalis caurina northern spotted owl	FT	ST	SE		D
Tympanuchus phasianellus columbianus Columbian sharptailed grouse	FC2				D
AMPHIBIANS and REPTILES					
Caretta caretta loggerhead sea turtle	FT	ST	ST		S
Chelonia mydas green sea turtle	FT	SE	ST		S
Clemmys marmorata marmorata northwestern pond turtle	FC2		ST		D
Dermochelys coriacea leatherback sea turtle	FE	SE	SE		S

SPECIAL STATUS SPECIES: ANIMALS
(Except Assessment Species)

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	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Lepidochelys olivacae olive (Pacific) Ridley sea turtle	FT	ST	SE		S
Plethodon elongatus Del Norte salamander	FC2				S
Plethodon larselli Larch Mountain salamander	FC2		ST		S
Plethodon stormi Siskiyou Mountains salamander	FC2				D
Rana pretiosa spotted frog				BS	D
FISH					
Catostomus luxatus Lost River sucker	FEO				D
Catostomus occidentalis lacusanserinus Goose Lake sucker	FC2				S
Catostomus rimuculus ssp. Jenny Creek sucker	FC2				D
Catostomus snyderi Klamath largescale sucker	FC2				D
Catostomus warnerensis Warner sucker	FT	ST			D
Chasmistes brevirostris shortnose sucker	FEO				D
Cottus bairdi ssp. Malheur mottled sculpin	FC2				D
Cottus tenuis slender sculpin	FC2				S
Gila alvordensis Alvord chub	FC2				D
Gila bicolor eurysoma Sheldon tui chub	FC2				S
Gila bicolor oregonensis Oregon Lakes tui chub	FC2				S
Gila bicolor ssp. Hutton tui chub	FTO	ST			S
Gila bicolor ssp. Catlow tui chub	FC2				D
Gila bicolor ssp. Summer Basin tui chub	FC2				S
Gila boraxobius Borax Lake chub	FEO	SE			D
Novumbra hubbsi Olympic mudminnow	FC2				S

SPECIAL STATUS SPECIES: ANIMALS
(Except Assessment Species)

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	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Oncorhynchus (=Salmo) clarki henshawi Lahonton cutthroat trout	FTO				D
Oncorhynchus (=Salmo) clarki ssp. Lahonton cutthroat trout	FC2				D
Oncorhynchus (=Salmo) clarki henshawi redband trout	FC2				D
Oregonichthys (=Hybopsis) crameri Oregon chub	FC2				D
Rhinichthys osculus ssp. Foskett speckled dace	FTO	ST			D
Salvelinus confluentus bull trout	FC2				D
MAMMALS					
Arborimus albipes white-footed vole	FC2				S
Balaenoptera musculus blue whale	FE	SE	SE		S
Brachylagus idahoensis pygmy rabbit			ST		D
Canis lupus gray wolf	FE	SE	SE		D
Enhydra lutris (incl. *nereis)* sea otter (incl. Southern)	FT	ST	SE		D
Eschrichitus robustus gray whale	FE	SE	SE		S
Eumetopias jubatus Steller sea-lion (=northern)	FT				D
Euderma maculatum spotted bat	FC2				D
Felis lynx canadensis North American lynx	FC2				D
Gulo gulo (including *luteus)* Wolverine (including California)	FC2	ST			D
Megaptera novaeangliae humped-backed whale	FE	SE	SE		S
Microtus pennsylvanicus kincaidi potholes meadow vole	FC2				D
Microtus townsendii pugeti Shaw Island Townsend's vole	FC2				D
Myotis thysanoides ssp. fringed bat				BS	D
Odocoileus virginianus leucurus Columbian white-tailed deer	FE	SE	SE		D

SPECIAL STATUS SPECIES: ANIMALS
(Except Assessment Species)

BUREAU OF LAND MANAGEMENT
OREGON STATE OFFICE

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	1990 Federal Register Notice of Review	Oregon State Status	Washington State Status	Bureau Sensitive Status	Occurrences
Ovis canadensis californiana California bighorn sheep	FC2				D
Plecotus townsendii townsendii Pacific western big-eared bat (=Townsends)	FC2				D
Sorex preblei Preble's shrew	FC2				S
Thomomys mazama helleri Gold Beach pocket gopher	FC2				S
Thomomys umbrinus detumidus Pistol River pocket gopher	FC2				S
Ursus arctos (=U.a. horribilis) grizzly bear	FT		SE		D
Vulpes macrotis kit fox		ST			D

Key to Abbreviations

1990 Federal Register Notice of Review

FE	Endangered
FT	Threatened
FEO	Endangered, Oregon only
FEW	Endangered, Washington only
FTO	Threatened, Oregon only
FC1	USFWS has information to support proposing as endangered or threatened
FC2	USFWS needs additional information before proposing as endangered or threatened, possibly extinct

State Status

SE	Endangered
ST	Threatened

Bureau Sensitive Status

BS	Bureau Sensitive In Oregon and Washington Districts

Key to BLM Occurrences

D	Documented
S	Suspected

Completed Habitat Management Plans

District	HMP Name	Priority Species	Projected Total Cost (Dollars)
BURNS	Bald Eagle Winter Roosts	Bald Eagle	16,800
	Blitzen River	Redband Trout	27,000
	Borax Lake Chub	Borax Lake Chub	7,500
	Burns District Bighorn Sheep	California Bighorn Sheep	218,000
	Burns District Wetlands	Waterfowl	472,642
	West Steens Deer Winter Range	Mule Deer	63,500
COOS BAY	Dean Creek Elk Viewing Area	Roosevelt Elk	1,633,700
	New River	Aleutian Goose, Per. Falcon, Snowy Plover	3,015,000
	Road Closure	Roosevelt Elk	333,000
	Tioga Creek	Chinook & Coho Salmon, Steelhead Trout	106,000
	Western Snowy Plover	Western Snowy Plover	75,000
	Coos Bay Shorelands	Western Snowy Plover	30,000
EUGENE	Lake Creek	Anadromous Fish	1,535,000
	Lower Siuslaw	Anadromous Fish	505,000
	McKenzie River	Aquatic	10,000
LAKEVIEW	Black Hills	Buckwheat	36,000
	Fort Rock Silver Lake	Mule Deer	639,000
	High Desert	Red Band Trout	52,000
	Klamath Interstate	Mule Deer	342,000
	North Warner	Antelope	378,000
	Paisley	Antelope	239,000
	South Warner	Mule Deer, Antelope	137,000
	Warner Aquatic	Warner Sucker	222,000
	Warner Wetlands	Waterfowl	2,116,000
MEDFORD	Agate Flat	Black-tailed Deer	5,000
	Board Tree	Northern Spotted Owl	8,000
	Buck Rock	Northern Spotted Owl	5,000
	Centennial	Northern Spotted Owl	8,000
	Grouse Creek	Northern Spotted Owl	8,000
	Ladybug Gulch	Northern Spotted Owl	8,000
	Lost Creek	Northern Spotted Owl	8,000
	Lost Lake	Northern Spotted Owl	5,000
	Montgomery Creek	Northern Spotted Owl	8,000
	Negro-Chapman	Northern Spotted Owl	8,000
	North Fork Deer Creek	Northern Spotted Owl	8,000
	Peavine	Elk	7,000
	Rogue River	Wood ducks, Great Blue Heron, Osprey, Western Pond Turtle, River Otter, Merganzers and Mallards, Bald Eagles, Peregrine Falcon, Coho and Steelhead	17,000
	Taylor Gulch	Northern Spotted Owl	8,000
	Timbered Rock	Northern Spotted Owl	8,000
PRINEVILLE	Gable Creek	Steelhead, Mule deer	74,000
	Horn Butte	Long Billed Curlew	16,000
	Murderers Creek	Bighorn, Mule deer, Steelhead, Elk, Bald Eagle	100,000
	Powell Butte	Mule deer	142,000
	Silene scaposa v. scaposa	Scaposa Catchfly	8,000
	South Fork John Day	Anadromous Fish	135,000

Completed Habitat Management Plans

District	HMP Name	Priority Species	Projected Total Cost (Dollars)
PRINEVILLE (cont.)	South Ochoco	Mule Deer, Elk, Non-Game	80,000
	White River	Elk, Blacktail Deer, Rainbow Trout, Turkey	50,000
ROSEBURG	Umpqua River Corridor	Bald Eagle, Osprey, Spotted Owl	25,500
SALEM	Elk Creek Bald Eagle	Bald Eagle	36,000
SPOKANE	Brewster Roost ACEC	Bald Eagle	12,000
	Chopaka Mountain	Mountain Goat	140,000
	Columbia Islands ACEC	Can. Goose, Waterfowl, Plants, Deer	5,000
	Douglas Creek	Rainbow Trout	92,000
	White Vulcan Mountain	Big Horn Sheep, Blue Goose, Mule & WT Deer	24,000
	Juniper Forest	Ferrug. & Swainsons, LB Curlew, Grouse, Deer	36,000
	Lincoln Co. Riparian	Waterfowl, Fish, Big Horn, Raptors, Grouse	120,000
	Sulfur Canyon	Sage grouse, Pygmy Rabbit, Deer	19,000
	Washburn Lake	Sharptail Grouse, Waterfowl	22,000
	Yakima Islands ACEC	Wood Duck, Waterfowl, Shorebirds	6,000
VALE	Batch Lake	Bald Eagle, Waterfowl	12,000
	Burnt River	Redband Trout, Big Game	45,300
	Castle Rock	Elk, Mule deer	39,600
	Cow Lakes	Bald Eagle, Waterfowl	18,000
	Coyne	Upland, Nongame	129,000
	Ferruginous Hawk	Ferruginous Hawk	6,000
	Hackelia cronquistii	Malheur Forget-Me-Not	15,000
	Kit Fox	Kit Fox	4,000
	Leslie Gulch	Bighorn Sheep	81,000
	Malheur Bighorn	Bighorn Sheep	15,000
	McDermitt Creek	Lahontan Trout, Rainbow, Brook	30,000
	Redband Trout	Redband Trout	100,000
	Reservoir and springs	Fish	183,000
	Whitehorse	Willow Whitehorse, Cutthroat Trout	450,000
	Wildlife Protection Areas	Songbirds, Deer	274,500
		TOTAL	**14,873,042**

Appendix G

Areas of Critical Environmental Concern

District/ Map Ref.	Management Name	Area In Acres	Key Values
Burns			
B-1	Silver Creek RNA	640	Stream system, sagebrush/bunchgrass
B-2	South Narrows	160	Designated critical habitat of listed plant species
B-3	Diamond Craters ONA	16,656	Diverse volcanic features, scenic, botanical
B-4	Picket Rim	4,000	Rimrock raptor habitat
B-5	Steens Mountain	50,500	Scenic, recreation, botanical (5 following RNAs)
B-6	Little Wildhorse Lake RNA	(240)	High elevation lake, alpine plants
B-7	Rooster Comb RNA	(720)	Mountain mahogany/black cottonwood/riparian
B-8	Little Blitzen RNA	(2,539)	Vernal pond, aspen grove, alpine grasslands
B-9	South Fork Willow Creek RNA	(227)	Glacial cirque, sensitive alpine plants
B-10	East Kiger Plateau RNA	(1,240)	High elevation fescue grassland
B-11	Mickey Basin RNA	560	Winterfat plant community
B-12	Alvord Desert	16,700	Alkaline flats, sand dunes, salt desert shrub uplands
B-13	Alvord Peak	14,700	Scenic, bighorn sheep habitat
B-14	Borax Lake	520	Marshland, thermal lake, listed chub
B-15	Pueblo Foothills RNA	2,520	Sensitive plant species, narrowleaf cottonwood, mormon tea
B-16	Tum Tum Lake RNA	1,521	Low elevation vernal pond
B-17	Long Draw RNA	440	Sagebrush/Indian ricegrass/needlegrass
Coos Bay			
C-1	Cherry Creek RNA*	815	Old growth Douglas fir/western hemlock
C-2	New River	494	Ephemeral coastal stream, wildlife/botanical habitat
Eugene			
E-1	Horse Rock Ridge	190	Grassy bald, botanical/wildlife habitat, scenic
E-2	Mohawk RNA	293	Old growth with wet sedge/alder meadow
E-3	Long Tom	8	Relict oak/grassland, wildlife habitat
E-4	Lake Creek Falls	3	Natural hazard, scenic, fish habitat
E-5	Fox Hollow RNA	160	Douglas fir/ponderosa pine mixture
E-6	Camas Swale RNA	280	Forest/meadow plant succession
E-7	Upper Elk Meadows RNA	205	Wet meadow/forest mosaic, wetlands
Lakeview			
L-1	Devil's Garden Lava Beds	29,640	Lava tubes, cinder cones, spatter cones, botanical
L-2	Lost Forest-Sand Dunes-Fossil Lake	30,000	Relict ponderosa pine, dune, prehistoric values
L-3	Lost Forest RNA**	(8,960)	Relict ponderosa pine/shrub and dunes
L-4	Warner Wetlands	40,730	Wildlife habitat, wetlands, prehistoric values, scenic
Medford			
M-1	King Mountain Rock Garden	90	High elevation serpentine soil habitat, scenic
M-2	Upper & Lower Table Rocks ONA	1,240	Geologic, diverse botanical habitat, scenic
M-3	Eight Dollar Mountain	1,240	Serpentine soils, unusual botanical habitat
M-4	Woodcock Bog RNA*	111	Hanging Bogs, Jeffrey pine/savannah
M-5	Brewer Spruce RNA*	210	High elevation mixed forest/brush/pond
Prineville			
P-1	Horn Butte	6,000	Long-billed curlew habitat
P-2	The Island RNA	162	Scenic, wildlife/juniper/sage/grassland habitat
P-3	Peck's Milkvetch	3,902	Sensitive botanical, critical deer winter range
P-4	Powell Butte RNA	520	Western juniper/big sagebrush/bluebunch wheatgrass
P-5	Lower Crooked River	2,830	Riparian and fish, also scenic
P-6	Badlands	16,860	Geologic formations, juniper forest, pictographs
P-7	Horse Ridge RNA	600	Western juniper/big sagebrush/threadleaf sedge and National Natural Landmark
P-8	Forest Creeks	405	Ponderosa pine, willow and riparian
P-9	North Fork Crooked River	6,737	Scenic, riparian and bald eagle habitat, fishery
P-10	Winter Roost	320	Bald eagle winter roost areas

Areas of Critical Environmental Concern

District/ Map Ref.	Management Name	Area In Acres	Key Values
Prineville (cont.)			
P-11	South Fork Crooked River	3,140	Riparian habitat, fishery, scenic
P-12	Benjamin RNA	640	Western juniper/Idaho fescue grassland
Roseburg			
R-1	Brad's Creek Wildlife	137	Bald eagle habitat
R-2	Myrtle Island RNA*	28	Old growth California laurel
R-3	Golden Bar Wildlife	217	Bald eagle and osprey habitat
R-4	North Umpqua River	1,620	Scenic, fish and wildlife habitat, riparian, old growth
R-5	North Myrtle Creek RNA*	240	Valley bottom mixed forest
R-6	Tater Hill Landslide RNA	169	Active landslide, geologic, botanical succession
R-7	Beatty Creek RNA*	170	Low elevation Jeffrey pine/savannah
Salem			
S-1	Big Canyon ONA	280	Scenic, old growth Douglas fir
S-2	High Peak-Moon Creek RNA	1,526	Old growth Douglas fir/western hemlock
S-3	Elk Creek Bald Eagle	1,656	Bald eagle nesting and roosting habitat, botanical
S-4	Nestucca River	5,280	Scenic, fisheries, wildlife, botanical
S-5	Sheridan Park	305	Threatened species habitat
S-6	The Butte RNA	40	Conifer forest/oak-grass ecotone
S-7	Saddleback Mtn. RNA	135	Old growth Pacific silver fir/western hemlock
S-8	Lost Prairie	60	Sphagum peat bog, botanical, wildlife habitat
S-9	Valley of the Giants ONA	47	Old growth Douglas fir/western hemlock
S-10	Rickreall Ridge	175	Diverse botanical habitat
S-11	Little Sink RNA	80	Diverse botanical, geologic features
S-12	Little Grass Mtn. ONA	42	Grass/fern bald, scenic, wildlife habitat
S-13	Yaquina Head ONA	100	Scenic, marine habitat, historic/prehistoric
S-14	Mary's Peak ONA	105	Sub-alpine botanical, scenic
S-15	Grass Mtn. RNA	728	Grass bald/rock garden botanical
S-16	Sandy River Gorge ONA	380	Scenic, low elevation old growth
S-17	Williams Lake	90	Seep formed lake, quaking bog
S-18	Soosap Meadows	400	Sub-alpine meadows
S-19	Table Rock Wilderness	5,400	Scenic, botanical, historic trail
S-20	Carolyn's Crown RNA	260	Old growth western red cedar, scenic
S-21	Middle Santiam Terrace	80	Old growth western hemlock/Douglas fir
Spokane			
SP-1	Iceberg Point & Point Colville	116	Scenic values, aquatic/terrestrial wildlife habitat
SP-2	Brewster Roost ACEC	200	Bald eagle winter roost
SP-3	Earthquake Point	40	Botanical
SP-4	Rock Island Canyon	1,200	Botanical
SP-5	Colockum Creek	40	Botanical
SP-6	Umtanum Ridge	320	Botanical
SP-7	Sentinel Slope	400	Botanical
SP-8	McCoy Canyon	160	Botanical
SP-9	Yakima River	25	Wildlife nesting habitat
SP-10	Columbia River Islands	308	Canada geese nesting habitat
SP-11	Juniper Forest	5,540	Raptor nesting habitat
SP-12	Roosevelt Slope	80	Botanical
Vale			
V-1	Grande Ronde	9,715	Goosenecks National Natural Landmark, scenic, sensitive animal habitat (portion in State of Washington)
V-2	Joseph Creek ONA	3,360	Riparian, geologic, scenic, wildlife (portion in State of Washington)
V-3	Hunt Mountain	2,230	Mountain goats and big game habitat
V-4	Powder River Canyon	5,880	Raptor and other wildlife habitat, cultural, scenic

Areas of Critical Environmental Concern

District/ Map Ref.	Management Name	Area In Acres	Key Values
Vale			
V-5	Keating Riparian RNA	2,173	Riparian and wildlife habitat
V-6	Homestead	8,537	Scenic, bald eagle/wildlife/botanical habitat
V-7	Sheep Mountain	5,398	Scenic, wildlife and bald eagle habitat
V-8	Unity Reservoir Bald Eagle	200	Bald eagle nesting habitat
V-9	Stockade Mountain RNA*	640	Juniper/sage/grassland communities
V-10	Leslie Gulch	9,300	Scenic volcanism, sensitive plants, bighorn sheep habitat
V-11	Mahogany Ridge RNA*	320	Mt. Mahogany/sagebrush and Mt. Mahogany/Or. grape
V-12	Jordan Crater RNA	29,679	Three important plant communities
V-13	Whitehorse Basin	1,290	Riparian and Whitehorse cutthroat trout

*RNAs designated prior to change in planning policy making them subcategories of ACECs.
**Acreage appearing inside paranthesis are part of another ACEC.

BIG GAME

Financial Planning Sheet

Workload Measures	FISCAL YEARS 1990-1991 Units	1990-1991 Cost ($000)	1992-1993 Units	1992-1993 Cost ($000)	1994-1995 Units	1994-1995 Cost ($000)	1996-2000 Units	1996-2000 Cost ($000)	TOTAL Units	TOTAL Cost ($000)
1. Inventory: 000s Acres	418	172.6	750	261.6	185	444.7	216	258.6	1569	1137.5
2. Monitoring: # Plans	35	277.1	83	545.1	118	624.3	241	1125.7	477	2572.2
3. Project Devel.: # Projects	41	436.7	101	1306.9	82	1750.4	224	5021.2	448	8515.2
4. Reintroductions: #, by Species	5	25	6	58	5	40	6	53	22	176
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	10	90.2	20	179.6	12	139.4	18	113.4	60	522.6
6. Coop. Agreements/ MOUs Needed: #	8	20.2	11	42.8	27	36.8	21	89.2	67	189
7. Maintenance: # projects maint.	258	226.3	271	387.4	292	448.6	811	1637.1	1632	2699.4
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	5	103	11	255	7	201	11	587.5	34	1146.5
10. Research: # Studies	4	74	11	243	9	189.4	5	155	29	661.4
TOTAL COST for Program Category		1425.1		3279.4		3874.6		9040.7		17,619.8
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Six additional Wildlife Biologists Nine additional Biological Technicians One additional Biostatistician									

UPLAND/SMALL GAME

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	333	71	517	203.2	276.5	105.8	221	135	1347.5	515
2. Monitoring: # Plans	11	30.5	20	50.5	33	87.3	133	325.4	197	493.7
3. Project Devel.: # Projects	3	36.5	46	172.8	63	237.3	113	330.1	225	776.7
4. Reintroductions: #, by Species	1	3	9	37.5	7	8.5	15	15.7	32	64.7
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	2	15	7	42.4	10	18.4	16	65.8	35	141.6
6. Coop. Agreements/ MOUs Needed: #	3	52	8	9	9	12	14	21	34	47
7. Maintenance: # projects maint.	7	10.7	41	75	54	101.5	141	259.9	243	447.1
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	1	12	3	219	2	131.2	3	221.7	9	583.9
10. Research: # Studies	0	0	1	20	3	66	3	50	7	136
TOTAL COST for Program Category		183.7		829.4		768.0		1424.6		3205.7
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	One additional Wildlife Biologist									

WETLANDS/WATERFOWL

Financial Planning Sheet

Workload Measures	FISCAL YEARS								TOTAL	
	1990-1991		1992-1993		1994-1995		1996-2000			
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	72	97	21.5	59.8	125	73.8	0	0	218.5	230.6
2. Monitoring: # Plans	10	124	22	238	30	262.4	77	652.6	139	1277
3. Project Devel.: # Projects	22	367.2	66	1024.3	62	766.3	106	1156	256	3313.8
4. Reintroductions: #, by Species	0	0	0	0	0	0	0	0	0	0
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	3	48	11	47.4	4	60.6	3	52	21	208
6. Coop. Agreements/ MOUs Needed: #	3	1.0	8	10.4	8	9.3	6	9.3	25	30.0
7. Maintenance: # projects maint.	8	105	22	124	55	284.2	207	833	292	1346.2
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	3	2117	10	3310.6	19	1176.4	12	486.8	44	7090.8
10. Research: # Studies	1	246	1	262	2	362	5	30	9	900
TOTAL COST for Program Category		3105.2		5076.5		2995.0		3219.7		14,396.4
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Three additional Wildlife Biologists One additional Biological Technician									

RAPTORS

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	763	219.4	2559	608.2	555	215	702	242.5	4579	1285.1
2. Monitoring: # Plans	19	77	28	171.5	55	388.1	179	1240.5	281	1877.1
3. Project Devel.: # Projects	21	20.2	55	60.3	5	11.3	22	27.5	103	119.3
4. Reintroductions: #, by Species	0	0	0	0	0	0	0	0	0	0
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	2	3	8	59.8	10	134.3	3	24	23	221.1
6. Coop. Agreements/ MOUs Needed: #	0	0	1	0	2	3	4	6	7	9
7. Maintenance: # projects maint.	0	0	0	0	0	0	8	12	8	12
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	1	10	1	10	0	0	0	0	2	20
10. Research: # Studies	0	0	0	0	5	170	3	55	8	225
TOTAL COST for Program Category		329.6		909.8		921.7		1607.5		3768.6
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	One additional Wildlife Biologist Three additional Biological Technicians									

RIPARIAN AREAS

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	169	184.3	787	279.7	859	499.7	123	507.9	1938	1471.6
2. Monitoring: # Plans	96	201.7	127	347.7	131	404.5	300	894.5	654	1848.4
3. Project Devel.: # Projects	63	1181.1	93	2709	318	3015.6	232	5579.9	706	12485.6
4. Reintroductions: #, by Species	0	0	0	0	0	0	0	0	0	0
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	1	10	8	51.1	7	32.8	16	101	32	194.9
6. Coop. Agreements/ MOUs Needed: #	0	0	11	14	10	14	30	29	51	57
7. Maintenance: # projects maint.	84	83.6	189	177.5	232	243.9	739	643.2	1244	1148.2
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	15	1739.4	25	5997.6	30	4094.8	54	11303.8	124	23135.6
10. Research: # Studies	1	16	4	82	3	40	7	75	15	213
TOTAL COST for Program Category		3416.1		9658.6		8345.3		19134.3		40554.3
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Two additional Wildlife Biologists Two additional Biological Technicians									

ANADROMOUS FISH

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	162	207.1	641	536.4	398	234.2	894	287	20.95	1264.7
2. Monitoring: # Plans	45	426	71	532.6	69	586.8	159	1342.7	344	2888.1
3. Project Devel.: # Projects	24	738.8	41	3518.3	41	2173.2	120	4419.5	226	10849.8
4. Reintroductions: #, by Species	0	0	0	0	0	0	0	0	0	0
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	7	80	14	160.6	16	138	17	151.4	54	530
6. Coop. Agreements/ MOUs Needed: #	1	9	5	19	4	49	10	25.5	20	102.5
7. Maintenance: # projects maint.	21	867.2	33	896.2	48	891.2	95	690	197	3344.6
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	1	6	1	372.2	2	428.2	9	72	13	878.4
10. Research: # Studies	0	11	2	253.6	4	267.6	6	461	12	993.2
TOTAL COST for Program Category		2345.1		6288.9		4768.2		7449.1		20851.3
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	13 additional Fishery Biologists 11 additional Biological Technicians									

RESIDENT FISH

Financial Planning Sheet

Workload Measures	FISCAL YEARS								TOTAL	
	1990-1991		1992-1993		1994-1995		1996-2000			
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	107	74.7	243	179.6	460	405.8	600	525.6	1410	1185.7
2. Monitoring: # Plans	6	63	15	94	17	113.4	31	526.8	69	797.2
3. Project Devel.: # Projects	5	75	15	245	25	326.8	56	835.2	101	1482
4. Reintroductions: #, by Species	0	0	0	0	0	0	0	0	0	0
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	0	0	5	30	6	24	18	82	29	136
6. Coop. Agreements/ MOUs Needed: #	0	0	2	3	6	9	16	24	24	36
7. Maintenance: # projects maint.	6	6	11	12	31	36	64	94.8	112	148.8
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	6	20	6	20
9. Acquisition and exchange: # projects (000s) acres	1	3	1	19	7	49.4	17	92.4	26	163.8
10. Research: # Studies	0	0	0	0	2	6	3	45	5	51
TOTAL COST for Program Category		221.7		582.8		970.4		2245.8		4020.7
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Three additional Fishery Biologists One additional Biological Technician									

SPECIAL STATUS ANIMALS (except fish)

Financial Planning Sheet

Workload Measures	FISCAL YEARS 1990-1991 Units	Cost ($000)	1992-1993 Units	Cost ($000)	1994-1995 Units	Cost ($000)	1996-2000 Units	Cost ($000)	TOTAL Units	Cost ($000)
1. Inventory: 000s Acres	1784	984.2	2625	1298.8	1417	722.8	1973	667.2	7799	3673
2. Monitoring: # Plans	76	1388.4	100	2373.5	143	2275.3	290	5587	609	11624.2
3. Project Devel.: # Projects	2	28	18	151	36	273.8	81	570.6	137	1023.4
4. Reintroductions: #, by Species	2	38	5	70	11	181.4	7	258.8	25	548.2
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	4	53	10	100.9	16	121.5	3	49	33	324.4
6. Coop. Agreements/ MOUs Needed: #	2	4.5	3	7.5	1	1	1	3	7	16
7. Maintenance: # projects maint.	1	1.5	8	29.5	9	32.5	60	145.3	78	208.8
8. # of Recovery Plans to be Developed	2	43	2	56.5	2	36	1	78	7	213.5
9. Acquisition and exchange: # projects (000s) acres	4	43	12	1089.8	10	1073.6	7	8679.4	33	10885.8
10. Research: # Studies	10	604	39	1963	39	1977	45	2302.5	133	6846.5
TOTAL COST for Program Category		3187.6		7140.5		6694.9		18340.8		35363.8
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	10 additional Wildlife Biologists 18 additional Biological Technicians									

SPECIAL STATUS PLANTS

Financial Planning Sheet

Workload Measures	FISCAL YEARS								TOTAL	
	1990-1991		1992-1993		1994-1995		1996-2000			
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	382	823.4	507	1172.5	467	1030.2	1130	2677.7	2486	5703.8
2. Monitoring: # Plans	58	182.2	98	567.3	115	629	274	1819.5	545	3198
3. Project Devel.: # Projects	13	35.1	25	82.9	20	134	31	175.4	89	427.4
4. Reintroductions: #, by Species	1	6	6	24	4	17	4	14	15	61
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	24	106.2	38	258.1	32	177.5	47	263.4	141	805.2
6. Coop. Agreements/ MOUs Needed: #	16	8.6	6	17.8	3	2.8	3	2.8	28	32
7. Maintenance: # projects maint.	4	7.5	13	17.9	32	38.9	78	106.8	127	171.1
8. # of Recovery Plans to be Developed	1	7	2	18	2	18	3	27	8	70
9. Acquisition and exchange: # projects (000s) acres	4	122.5	16	356.5	15	272.9	31	735	66	1488.4
10. Research: # Studies	19	167.4	26	317.8	27	343.8	69	884	141	1713
TOTAL COST for Program Category		1465.9		2832.9		2664.1		6705.3		13668.2
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	14 additional Botanists One additional Biological Technician									

SPECIAL STATUS FISH

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	172	95.5	130	78	136	106.8	210	125	648	405.3
2. Monitoring: # Plans	18	75	25	101	30	108	59	234	132	518
3. Project Devel.: # Projects	4	37	15	103	11	77	39	345	69	562
4. Reintroductions: #, by Species	0	0	0	0	0	0	2	3	2	3
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	2	9	7	34	4	24	15	73	28	140
6. Coop. Agreements/ MOUs Needed: #	3	3.3	7	6.3	7	6.3	14	18	31	33.9
7. Maintenance: # projects maint.	35	30	76	68	81	89	207	192	399	379
8. # of Recovery Plans to be Developed	1	3	1	30	0	0	4	72	6	105
9. Acquisition and exchange: # projects (000s) acres	4	365	4	704	6	711	15	1757	29	3537
10. Research: # Studies	3	18.5	4	46.5	3	13.5	6	66	16	144.5
TOTAL COST for Program Category		636.3		1170.8		1135.6		2885		5827.7
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Two additional Fishery Biologists/Aquatic Ecologists									

SPECIAL HABITATS ANIMALS

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	983.5	333.7	583	449.8	105	98.4	326	159	1997.5	1040.9
2. Monitoring: # Plans	10	81.4	15	116	15	93.6	39	251.6	79	542.6
3. Project Devel.: # Projects	28	247.8	51	280.7	57	298.5	128	662.2	264	1489.2
4. Reintroductions: #, by Species	0	0	0	0	1	10	1	10	2	20
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	0	0	9	31.4	9	34.6	0	0	18	66
6. Coop. Agreements/ MOUs Needed: #	0	0	0	0	0	0	0	0	0	0
7. Maintenance: # projects maint.	0	0	2	1	2	2	12	25.8	16	28.8
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	0	121	0	0	1	8.4	1	8.4	3	137.8
10. Research: # Studies	2	63.5	2	227	21	163	7	360	32	813.5
TOTAL COST for Program Category		847.4		1105.9		708.5		1477		4138.8
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Four additional Wildlife Biologists Three additional Biological Technicians									

SPECIAL HABITATS PLANTS

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	115	214.5	209	344.3	121	266.9	344	384.9	789	1210.6
2. Monitoring: # Plans	34	73.1	69	346.2	125	515.8	375	1897.2	603	2832.3
3. Project Devel.: # Projects	7	45.4	29	226.1	36	178.9	49	409.8	121	860.2
4. Reintroductions: #, by Species	0	0	0	0	6	18	0	0	6	18
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	21	125.6	42	250.7	45	227.5	93	442.7	201	1046.5
6. Coop. Agreements/ MOUs Needed: #	2	1.4	2	1.4	2	1.4	2	1.4	8	5.6
7. Maintenance: # projects maint.	1	3	4	4.4	9	13.8	51	215.8	65	237
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	4	272	12	144.3	17	156	28	996.5	61	1568.8
10. Research: # Studies	6	130.3	14	330	21	400.2	26	772	67	1632.5
TOTAL COST for Program Category		865.3		1647.4		1778.5		5120.3		9411.5
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	13 additional Botanists/Plant Ecologists									

INTERNAL COORDINATION & SUPPORT

Financial Planning Sheet

Workload Measures	FISCAL YEARS								TOTAL	
	1990-1991		1992-1993		1994-1995		1996-2000			
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	57	37	107	65	7	26	17	55	188	183
2. Monitoring: # Plans	45	287.5	85	482.5	82	387	194	1022	406	2179
3. Project Devel.: # Projects	3	23.8	6	68.2	2	61.8	6	93.4	17	247.2
4. Reintroductions: #, by Species	0	0	0	0	0	1.4	0	0	0	1.4
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	1	42.8	2	77.6	0	68.4	0	175.2	3	364
6. Coop. Agreements/ MOUs Needed: #	0	0	0	0	0	0	0	0	0	0
7. Maintenance: # projects maint.	1	24.6	2	49.2	2	49.2	5	105	10	228
8. # of Recovery Plans to be Developed	56	69	112	138	112	138	280	345	560	690
9. Acquisition and exchange: # projects (000s) acres	3	26.6	6	47.6	6	49	15	138.6	30	261.8
10. Research: # Studies	0	0	0	0	0	0	0	0	0	0
TOTAL COST for Program Category		511.3		928.1		780.8		1934.2		4154.4

Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	One additional Engineer Five Realty Specialists Three Computer Specialists Four Procurement Specialists One Minerals Specialist Four Staff Assistants Two Personnel Specialists One Hydrologist	Five Range Conservationists Eleven Volunteer Coordinators

PUBLIC OUTREACH

Financial Planning Sheet

Workload Measures	FISCAL YEARS									
	1990-1991		1992-1993		1994-1995		1996-2000		TOTAL	
	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)	Units	Cost ($000)
1. Inventory: 000s Acres	0	0	0	0	0	0	0	0	0	0
2. Monitoring: # Plans	1	0.7	2	1.5	2	1.5	5	3.8	10	7.5
3. Project Devel.: # Projects	35	222.9	71	605.5	64	554.9	134	977.5	304	2360.8
4. Reintroductions: #, by Species	0	0	0	0	1	9	3	18	4	27
5. # Plans to be Developed (HMPs, ACECs, CMAs, CRMPs)	1	30.6	2	200.2	2	195.8	5	574.4	10	1001
6. Coop. Agreements/ MOUs Needed: #	0	0	0	0	0	0	0	0	0	0
7. Maintenance: # projects maint.	1	10	2	30.5	2	33	2	50	7	123.5
8. # of Recovery Plans to be Developed	0	0	0	0	0	0	0	0	0	0
9. Acquisition and exchange: # projects (000s) acres	0	0	0	0	0	0	0	0	0	0
10. Research: # Studies	0	0	0	0	0	0	0	0	0	0
TOTAL COST for Program Category		264.2		837.7		794.2		1623.7		3519.8
Staffing/Skills Required: (# and types of perm. positions; workmonth cost has been incorporated in workload measure estimates above)	Three additional Public Affairs Specialists									

Yaquina Head Outstanding Natural Area–Chuck Forinash

Mission and Philosophy
of
Oregon/Washington BLM

The mission of the Oregon/Washington BLM is to enhance the quality of life of present and future generations through innovative leadership in management of natural resources and stewardship of the ecosystems of the Pacific Northwest in particular and the global environment in general.

We are committed to functioning with technical excellence, fiscal responsibility, and human sensitivity in fulfilling the following objectives:

- Instilling a stewardship ethic for conservation and prudent use of the land and its resources;
- Promoting public partnerships and global policies which sustain health and diversity of the ecosystems;
- Fostering social and economic responsibility in the use and management of lands and resources;
- Making a positive difference with our natural and human resources; and
- Creating a diverse work force which contributes to individual growth while serving our mission.

Back Cover Photo:
Ferruginous Hawk–Marty Cordano

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U.S. Department of the Interior
Bureau of Land Management